VOLUME LVI
NUMBER FOUR

THE NATIONAL GEOGRAPHIC MAGAZINE

OCTOBER, 1929

CONTENTS

TWENTY-FOUR PAGES OF ILLUSTRATIONS IN FULL COLOR

Manchuria, Promised Land of Asia
With 59 Illustrations FREDERICK SIMPICH

The Oriental Pageantry of Northern India
30 Natural-Color Photographs FRANKLIN PRICE KNOTT

Houseboat Days in the Vale of Kashmir
With 22 Illustrations FLORENCE H. MORDEN

Two Fighting Tribes of the Sudan
With 28 Illustrations MERIAN C. COOPER and ERNEST B. SCHOEDSACK

Summer Holidays on the Bosporus
With 14 Illustrations MAYNARD OWEN WILLIAMS

Beside the Bosporus, Divider of Continents
11 Natural-Color Photographs

PUBLISHED BY THE
NATIONAL GEOGRAPHIC SOCIETY
HUBBARD MEMORIAL HALL
WASHINGTON, D.C.

$3.50 A YEAR
50c THE COPY

XUM

NATIONAL GEOGRAPHIC SOCIETY

GEOGRAPHIC ADMINISTRATION BUILDINGS
SIXTEENTH AND M STREETS NORTHWEST, WASHINGTON, D. C.

GILBERT GROSVENOR, President
O. P. AUSTIN, Secretary
JOHN JOY EDSON, Treasurer
FREDERICK V. COVILLE, Chairman Committee on Research
JOHN OLIVER LA GORCE, Vice-President
GEO. W. HUTCHISON, Associate Secretary
HERBERT A. POOLE, Assistant Treasurer
EDWIN P. GROSVENOR, General Counsel

EXECUTIVE STAFF OF THE NATIONAL GEOGRAPHIC MAGAZINE

GILBERT GROSVENOR, EDITOR
JOHN OLIVER LA GORCE, Associate Editor
WILLIAM J. SHOWALTER, Assistant Editor
RALPH A. GRAVES, Assistant Editor
FRANKLIN L. FISHER, Chief of Illustrations Division
J. R. HILDEBRAND, Chief of School Service

BOARD OF TRUSTEES

CHARLES J. BELL
Chairman of the Board, American Security and Trust Company

JOHN JOY EDSON
Chairman of the Board, Washington Loan & Trust Company

DAVID FAIRCHILD
In charge of Agricultural Explorations, U. S. Department of Agriculture

C. HART MERRIAM
Member National Academy of Sciences

O. P. AUSTIN
Statistician

GEORGE R. PUTNAM
Commissioner U. S. Bureau of Lighthouses

THEODORE W. NOYES
Editor of The Evening Star

STEPHEN T. MATHER
Formerly Director National Park Service

WILLIAM HOWARD TAFT
Chief Justice of the United States

JOHN J. PERSHING
General of the Armies of the United States

C. M. CHESTER
Rear Admiral U. S. Navy, Formerly Supt. U. S. Naval Observatory

J. HOWARD GORE
Prof. Emeritus Mathematics, The George Washington University

FREDERICK V. COVILLE
Botanist, U. S. Department of Agriculture

GEORGE SHIRAS, 3D
Formerly Member U. S. Congress, Faunal Naturalist and Wild-Game Photographer

JOHN OLIVER LA GORCE
Associate Editor National Geographic Magazine

CALVIN COOLIDGE
Formerly President of the United States

CHARLES G. DAWES
American Ambassador to Great Britain

JOHN BARTON PAYNE
Chairman American Red Cross

A. W. GREELY
Arctic Explorer, Major General U. S. Army

GILBERT GROSVENOR
Editor of National Geographic Magazine

GEORGE OTIS SMITH
Director U. S. Geological Survey

O. H. TITTMANN
Formerly Superintendent U. S. Coast and Geodetic Survey

JOHN FOOTE, M. D.
Dean and Professor of Pediatrics, Georgetown University

ORGANIZED FOR "THE INCREASE AND DIFFUSION OF GEOGRAPHIC KNOWLEDGE"

TO carry out the purposes for which it was founded forty-one years ago the National Geographic Society publishes this Magazine monthly. All receipts are invested in the Magazine itself or expended directly to promote geographic knowledge.

ARTICLES and photographs are desired. For material which the Magazine can use, generous remuneration is made. Contributions should be accompanied by addressed return envelope and postage.

IMMEDIATELY after the terrific eruption of the world's largest crater, Mt. Katmai, in Alaska, a National Geographic Society expedition was sent to make observations of this remarkable phenomenon. Four expeditions have followed and the extraordinary scientific data resulting given to the world. In this vicinity an eighth wonder of the world was discovered and explored—"The Valley of Ten Thousand Smokes," a vast area of steaming, spouting fissures. As a result of The Society's discoveries this area has been created a National Monument by proclamation of the President of the United States.

AT an expense of over $50,000 The Society sent a notable series of expeditions into Peru to investigate the traces of the Inca race. Their discoveries form a large share of our knowledge of a civilization waning when Pizarro first set foot in Peru.

THE Society also had the honor of subscribing a substantial sum to the expedition of Admiral Peary, who discovered the North Pole, and has contributed $25,000 to Commander Byrd's Antarctic Expedition.

NOT long ago The Society granted $25,000, and in addition $75,000 was given by individual members to the Government when the congressional appropriation for the purpose was insufficient, and the finest of the giant sequoia trees of California were thereby saved for the American people.

THE Society has conducted extensive excavations at Pueblo Bonito, New Mexico, where prehistoric peoples lived in vast communal dwellings before the days of Columbus; it is sponsoring an ornithological survey of Venezuela, and is maintaining an important photographic and botanical expedition in Yunnan Province, China.

TO further the study of solar radiation in relation to long range weather forecastings, The Society has appropriated $65,000 to enable the Smithsonian Institution to establish a station for five years on Mt. Brukkaros, in Southwest Africa.

Copyright, 1929, by National Geographic Society, Washington, D. C., in the United States and Great Britain. All rights reserved. Entered at the Post Office at Washington, D. C., as Second-Class Mail Matter. Acceptance for mailing at special rate of postage provided for in Sec. 1103, Act of October 3, 1917, authorized July 1, 1918.

TIFFANY & CO.

JEWELERS SILVERSMITHS STATIONERS

DIAMOND RINGS

Noted for Quality
From Generation to Generation

MAIL INQUIRIES RECEIVE PROMPT ATTENTION

FIFTH AVENUE & 37TH STREET
NEW YORK

TWENTY-EIGHTH ANNUAL PRESENTATION

Cadillac Presents

A Magnificent Line of New Models

In this presentation of new Cadillacs, La Salles and Fleetwoods, it is plainly apparent that Cadillac has been able to deal more generously with its great public than ever before in its history.

More than that—it is quite evident that the superiority of these offerings from an investment as well as an artistic standpoint should, through sheer logic of value, double and treble in numbers this loyal Cadillac public.

Anyone who studies these remarkable cars can scarcely fail to be struck by the fact that two interesting and important things have happened.

The first is that *they look and act the part of their great reputation and social leadership more unmistakably than ever.*

The second is that this social and reputation value is expressed in a price value readily recognizable as far and away the most attractive offering in the three finest-car fields.

Cadillac has grown for twenty-eight years not by giving less but by steadily giving more and more; and this last is the most brilliant of all the examples which have occurred, in that time, of the success of this Cadillac principle.

All three lines possess features which render them unique—Syncro-Mesh Silent-Shift Transmission, Safety-Mechanical Four-Wheel Brakes, and non-shatterable Security-Plate Glass in all windows, doors and windshields.

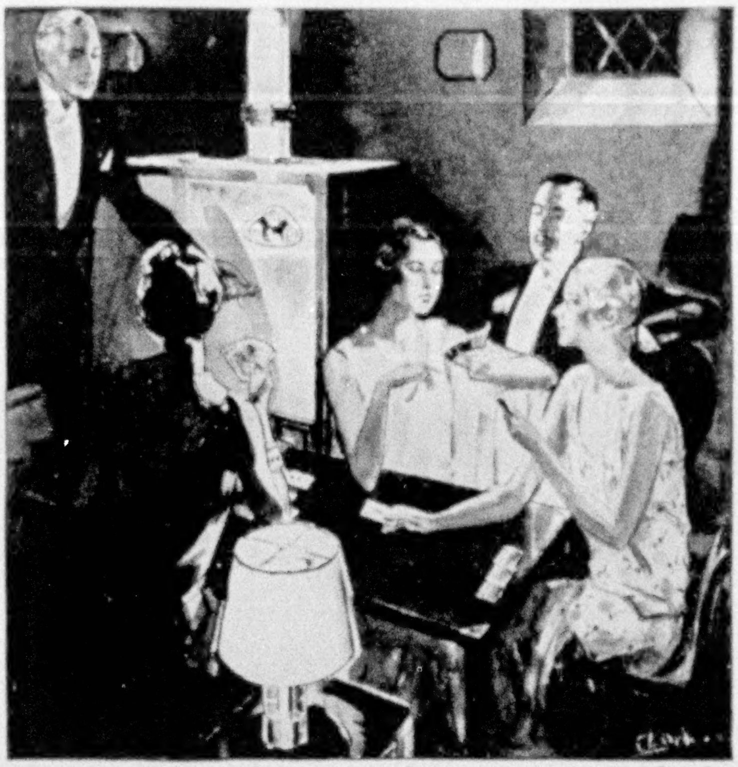
All of them are beautiful in design—even smarter and swifter looking and acting than they have been before.

All of them have surpassed themselves in the rich dignity and appointments of the newly designed Fisher and Fleetwood bodies.

In these respects—quiet and dignified but sumptuous in appearance and equally sumptuous in riding ease—there is nothing with which to compare them.

Climaxing all this, these cars are offered at prices which render it unnecessary for Cadillac to say more of the cars than to extend a cordial invitation to the public to enjoy their inspection. Cadillac Motor Car Co., Division of General Motors.

To *live in your present house with Bryant Gas Heating would be . . . like moving into a new home*



The new Model 45 *Bryant Boiler is the "perfected boiler for the perfect fuel"*

A Bryant Heater can literally transform a house—make it larger . . . . cleaner . . . far more convenient . . . requiring less daily labor . . . and a healthier spot as well as a happier one.

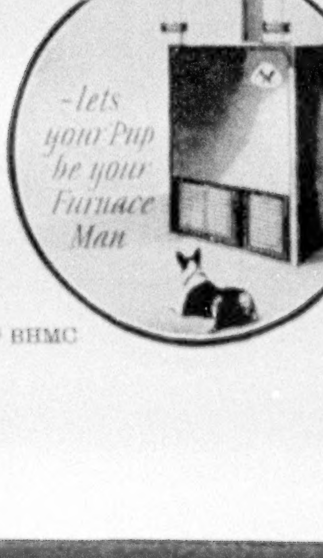
Larger because Bryant Heating adds the basement to the clean and useful livable space.

Cleaner because a Bryant generates no soot, dust, grime or greasy vapors.

More convenient because Bryant Heating requires no furnace tending. The house is warm when you awake and stays warm until the hour when you want it cooler for sleeping—all for the effort of winding an eight-day clock once a week!

Less daily labor because even the daily dusting requires less elbow grease in a Bryant-heated home.

BRYANT GAS HEATING


-lets your Pup be your Furnace Man

© BHMC

Healthier because of the uniform temperatures—no sweltering one moment and being chilled a half-hour later.

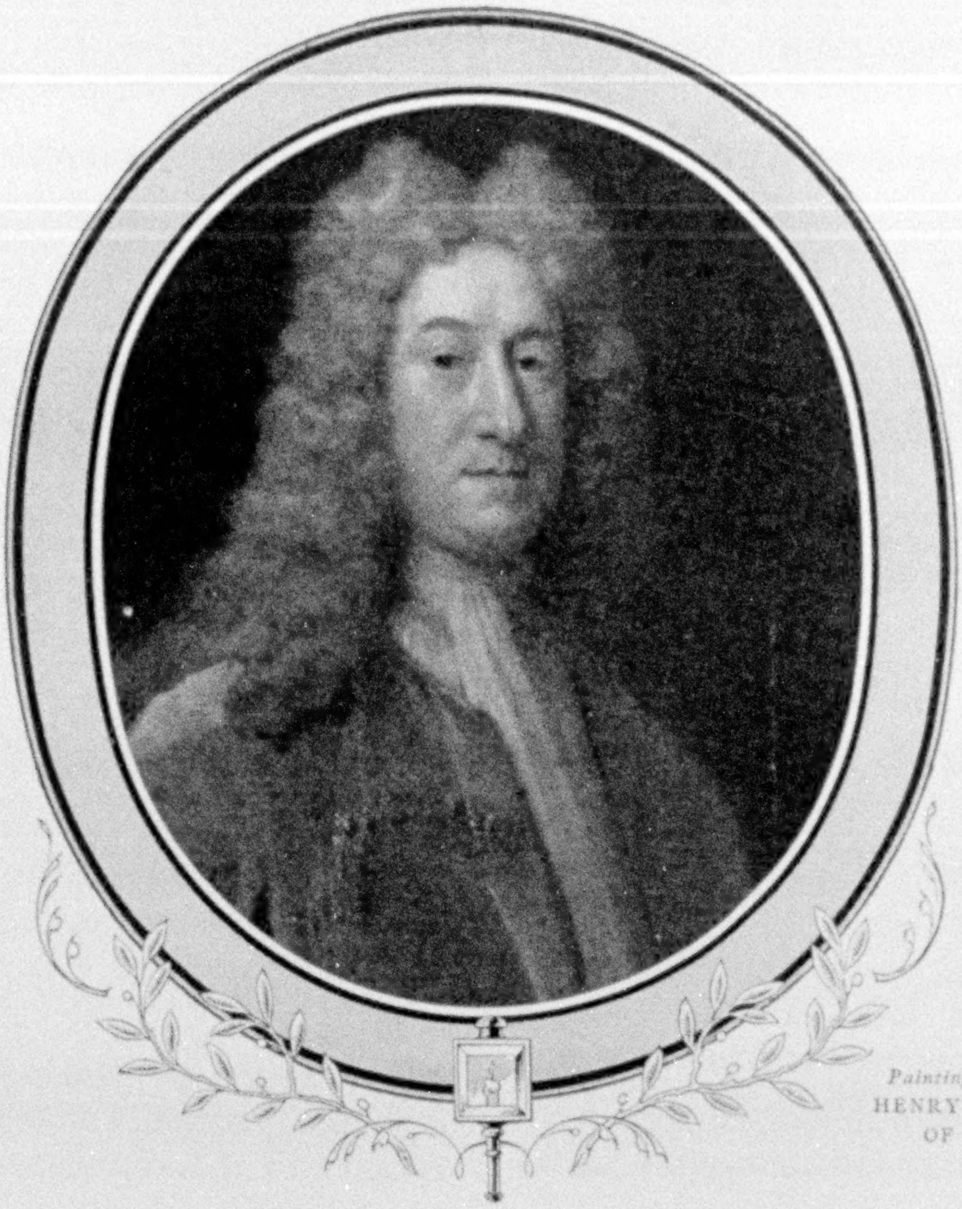
Happier because tempers are never worn ragged by break-downs or the need for frequent coddling of a balky furnace or a complicated mechanism.

Bryant *truly automatic* Heating has been called the "greatest single convenience ever offered the American home." Thousands of Bryant owners will emphatically approve that enthusiastic statement. Yet many of them have found that the cost of heating with a plant so utterly simple and automatic that "you can let your pup be furnace man" is not a dollar more than with heating plants which required incessant care and frequent servicing.

How long will you and your family be condemned each winter to "six months' hard labor and discomfort?"

Take the first step toward Furnace Room Independence . . . write for a complete description of Bryant truly automatic Gas Heating and the new Bryant Model 45 Boiler.

THE BRYANT HEATER & MFG. CO.
17834 St. Clair Avenue Cleveland, Ohio



From the
Painting by Sir Godfrey Kneller
HENRY FLEETWOOD, ESQ.
OF PENWORTHAM
LANCASTER
ENGLAND

GOLDEN TRADITIONS * THE INSPIRATION OF FLEETWOOD

No manufacturer is more vividly aware of the debt of gratitude which modern industry owes to the artisans and the craftsmen of the past, than is Fleetwood. ¶ The spirit which moved the carriage builders of those earlier days, is *today* the inspiration of the artisans in the custom body shops of Fleetwood, in America—a community of craftsmen which takes its name from that beautiful English town founded by the celebrated Fleetwood family which flourished in England in the seventeenth and eighteenth centuries. ¶ The rich traditions of three hundred years of coach building, applied and developed by Fleetwood, have secured for Fleetwood Bodies a special and separate place in the minds of the most discriminating circles in the world. ¶ The quality of every Fleetwood Body is heightened by the superb engineering contributed by Fisher and its actual value vastly increased by reason of the fact that Fleetwood commands the unequaled facilities and resources of the Fisher Body organization. ¶ It is particularly fitting that the names and the physical and designing resources of Fleetwood and Fisher should reinforce each other, and particularly notable that this association brings to Fleetwood advantages which Fleetwood, alone among custom body builders, enjoys. ¶ In the past, Fleetwood Bodies have graced such notable chassis as Hispano-Suiza, Isotta Fraschini, Mercedes, Minerva, Rolls-Royce, Duesenberg, Cadillac and La Salle. Fleetwood will continue to create custom designs for these and other chassis, and to deserve, in ever larger measure, the high repute attaching to the Fleetwood name.

TODAY . . .
MORE THAN EVER BEFORE THE TIDE IS TURNING TO BUICK

WHEN
BETTER
AUTOMOBILES
ARE BUILT

BUICK
WILL
BUILD
THEM

It was the immortal Stevenson who said, "The best reward for having wrought well is to have more to do."

The men and women of America have bestowed that reward upon Buick in overwhelming measure by ordering more and more Buicks year after year throughout a quarter of a century.

Buick craftsmen have created their greatest motor car in Buick for 1930.

Buick owners have long re-purchased Buicks in greater volume than the total demand for any other fine car. But today they are re-purchasing Buicks with keener eagerness than ever before.

Thousands of motorists have turned each year from other cars to Buick. But today the swing to Buick is more pronounced and widespread than in any previous year.

These two groups combined have long purchased more than twice as many Buicks as any other car priced above $1200. But today they are awarding Buick a stronger vote of preference than at any time in the past.

The motorists of America have studied the new Buick—compared it—and made up their minds that Buick has *wrought well.* And so they are calling upon Buick for a still higher percentage of America's quality automobiles.

Today more than ever before the demand for Buick surpasses the demand for any other fine car. Today more than ever before the tide is turning to Buick.

Buick

BUICK MOTOR COMPANY, FLINT, MICHIGAN

Canadian Factories
McLaughlin-Buick, Oshawa, Ont.

Division of General Motors Corporation

Builders of
Buick and Marquette Motor Cars

46-day Cruises by White Star to the

MEDITERRANEAN

Revel in its old-world charm and twentieth century sophistication. Vivacious Naples and silent Pompeii — the hoary antiquity of Egypt and the savoir faire of Monte Carlo! The itinerary covers also Madeira, Gibraltar, Algiers, Athens, Constantinople, the Holy Land; Syracuse, etc. Sailings from New York: ***S. S. Laurentic,*** January 9 and February 27; ***S. S. Adriatic,*** January 18 and March 8. First Class $695 up; Tourist Third Cabin $420 — both including complete shore program.

WINTER VACATION?
# of course! but where?

WORLD CRUISE OF THE BELGENLAND... *largest, finest liner that has ever circled the globe.* Sail westward from New York Dec. 20 on a gorgeous, 133-day itinerary, the result of five years' experience in round-the-world cruises. Turn cosmopolitan and crowd a lifetime of exciting sensations into 19 vivid weeks. Sample the flavor of the world's most glamorous cities, each at a delectable season—with arrival in Europe in April, for Spring sojourns. Cruise operated jointly by ***Red Star Line*** and ***American Express Co.*** $1750 up, including complete shore excursions.

HAVANA-NASSAU-BERMUDA CRUISES by the ***Red Star liner Lapland.*** 11 days. Here's the short, stimulating trip for the tired business man, the weary society matron, the debutante who wants a change. Liberal stopovers. If you are going to Bermuda, you will welcome the opportunity of visiting Havana and Nassau. Fortnightly sailings from New York December 28 to March 8. $175 up.

RED STAR LINE
WHITE STAR LINE

INTERNATIONAL MERCANTILE MARINE COMPANY

IMM

For full information address No. 1 Broadway, New York; 180 No. Michigan Ave., Chicago; 460 Market St., San Francisco; our offices elsewhere or authorized steamship agents.

~~

What Price-Class ?

The important thing to consider in purchasing a car is the cost of *owning*—not the cost of *buying*

Unfortunately people have grouped cars into "price-classes." There is the "$1000 price-class," the "$1500 price-class," the "$2000 price-class," and so on.

This informal classification is misleading. It lays entirely too much emphasis on the *relatively* unimportant first cost of any car and none on the very important cost of ownership and use. Hence people delude themselves as to how good a car they can afford to own.

Paying for a Packard Without Owning One!

Here is a carefully considered statement which may astonish you: If you have been in the habit of paying ten or twelve hundred dollars or more for your motor cars, then you can easily afford a Packard Eight! In fact, *you are very likely paying for a Packard without owning one!*

It can be demonstrated to you that you may own and drive a Packard Standard Eight *at no greater cost,* over a period of four or five years, than the expense of owning your present "price-class" car.

Most of the items of cost in *operating* a car are the same as between a Packard Eight and any car down to *half the cost of a Packard.* And if you will use even *half* the mileage we build into your Packard your depreciation charge will be so low that *the saving will completely offset the original cost difference.*

The Packard Eight Has No Price-Class

The Packard Eight is not in a "price-class." We build it as well as a motor car can be built. We build it to last—and we price it fairly. Then we protect the investment of our owners. No radical changes have depreciated Packard cars from year to year. Our owners keep their Packards—and *enjoy* keeping them—nearly twice as long as they have been in the habit of keeping their "price-class" cars. And in doing so they drive Packard Eights at no extra charge!

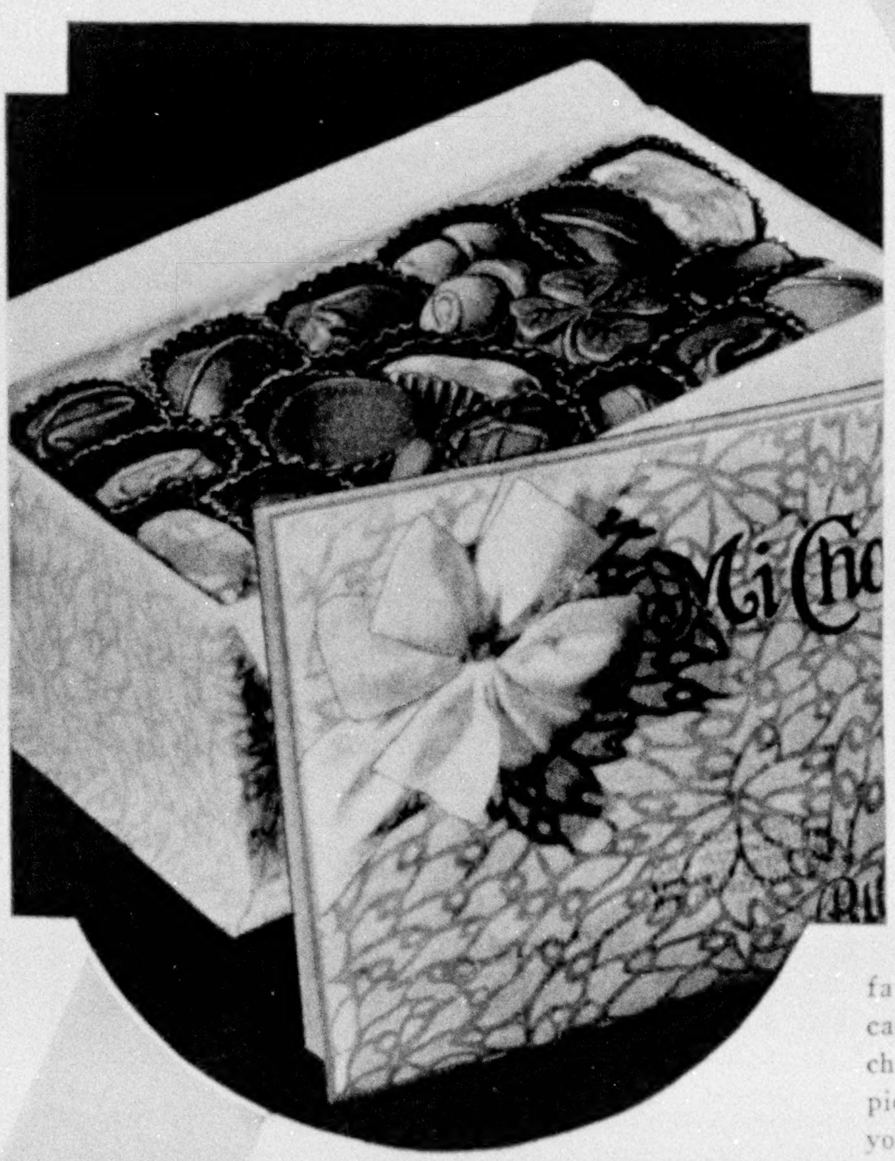
If you want a Packard Eight—buy one! You may buy it out of income—and there is no better investment. Remember you are very probably paying for a Packard no matter what car costing over $1000 you may be driving. Packard dealers everywhere have the facts and will gladly give them to you.

You *can* afford a Packard.

ASK THE MAN WHO OWNS ONE

PACKARD MOTOR CAR COMPANY
DETROIT - - - MICHIGAN

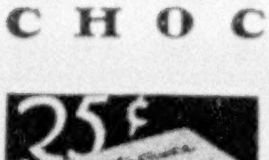
Bunte
WORLD FAMOUS
CANDIES



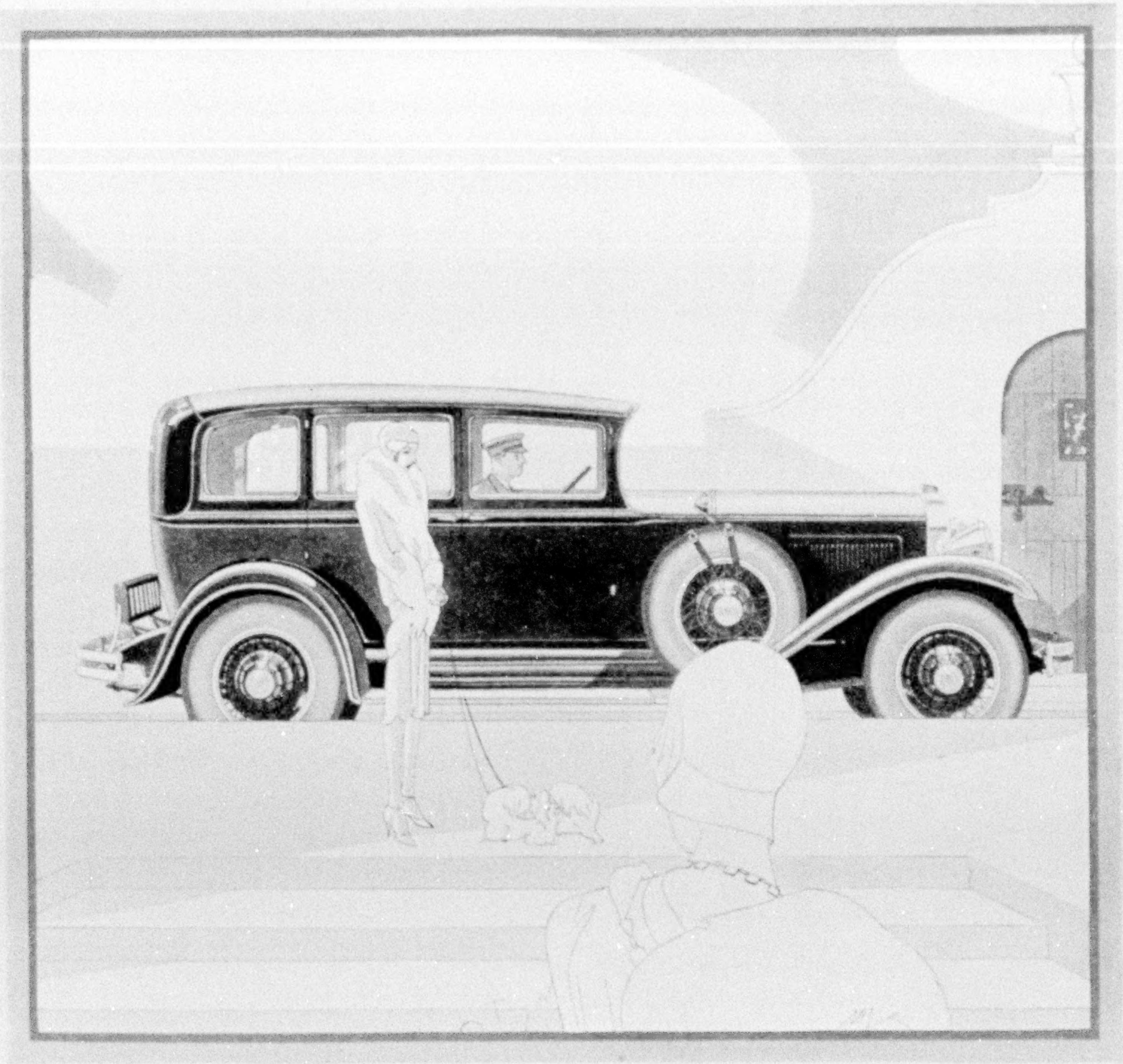
MI CHOICE . . . the candy favorite of the smartly sophisticated . . . a package of alluring charm . . . filled with masterpieces of the confectioner's art . . . your gift on Sweetest Day. If your dealer does not have the Mi Choice package, use the coupon below. *Smartly packaged . . one . . two . . three and five pounds.*

Mi Choice
CHOCOLATES

BUNTE BROTHERS
3335 Franklin Blvd., Chicago, Illinois
☐ I enclose $1.50 for a one pound Mi Choice package.
☐ I enclose 25c for the miniature Mi Choice sample package.



Name..............................
Address..............................
City..............................
Dealer's Name..............................

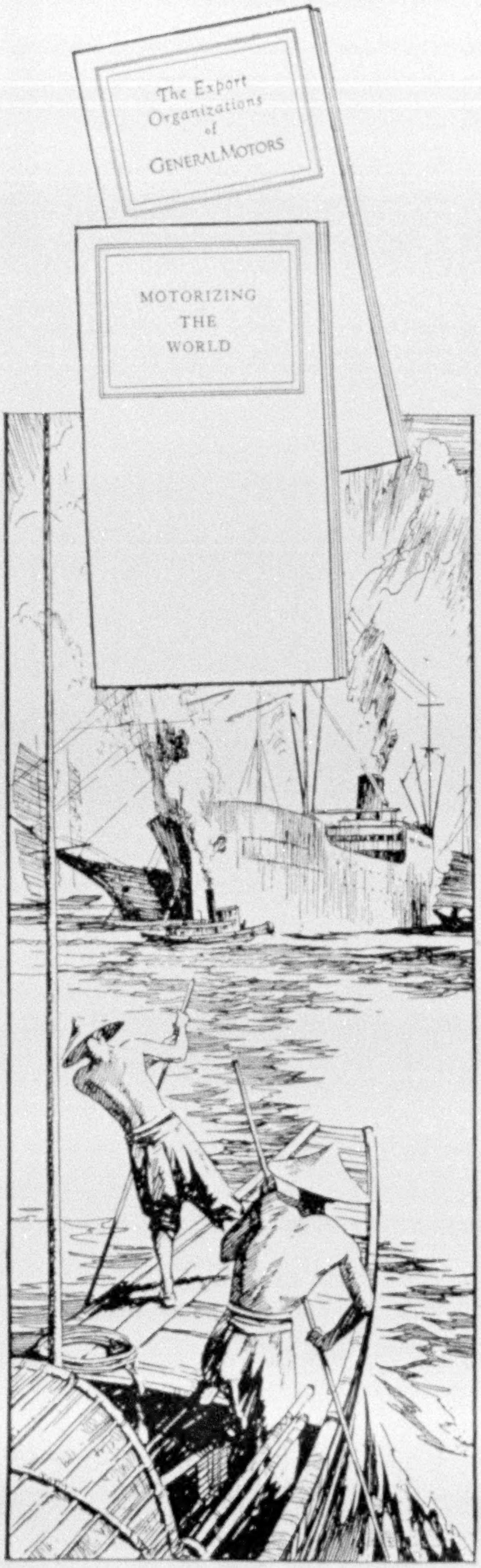


The President Eight State Sedan, for five—six wire wheels and trunk rack standard equipment—$1875 at the factory. Bumpers and spare tires extra.

NO MERE fortunate placement of a line here, and a curve there, could by any chance have achieved results so happy as the coachcraft of Studebaker's great straight eights and sixes. In their poised and eager style you see Studebaker's champion speed and stamina reflected with utmost fidelity. This admirable harmony, in cars so moderate in cost, has won for Studebaker the tribute of continued world leadership in the sale of eight-cylinder motor cars.

STUDEBAKER

Builder of Champions


The Export Organizations of General Motors
MOTORIZING THE WORLD

Motorizing the world

INVESTORS, bankers and business men interested in foreign trade will find information of value in the booklets entitled *Motorizing the World* and *The Export Organizations of General Motors.*

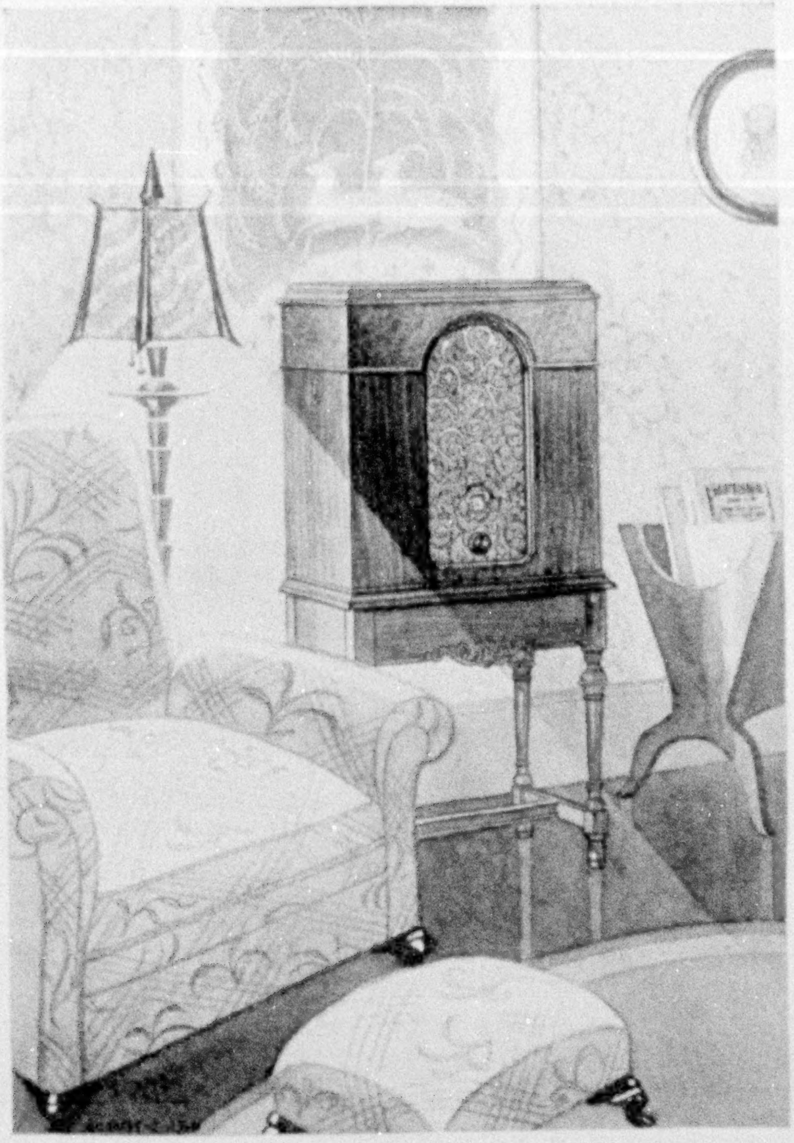
It is the policy of General Motors to issue from time to time booklets for the information of stockholders and many of the principles and policies outlined are applicable to other lines of business.

Copies of these two booklets will be mailed promptly if the request is addressed to Department K-8, General Motors Corporation, Broadway at 57th Street, New York.

GENERAL MOTORS

"A car for every purse and purpose"

CHEVROLET · PONTIAC · OLDSMOBILE
MARQUETTE · OAKLAND · VIKING
BUICK · LASALLE · CADILLAC
All with Body by Fisher
GENERAL MOTORS TRUCKS
YELLOW CABS and COACHES
FRIGIDAIRE—The Automatic Refrigerator
DELCO-LIGHT Electric Power and Light Plants
DL WATER SYSTEMS · GMAC Plan of Credit Purchase



The two newest features in fine radio set design are both found in the new

RCA SCREEN-GRID Radiola 46

with the incomparable RCA Electro-Dynamic Reproducer $179 *less Radiotrons*

An improved type of the incomparable RCA Electro-Dynamic reproducer is built into the handsome cabinet of the new Radiola 46. This amazing instrument, which realistically reproduces everything from a whisper to a brass band, is combined with the new Screen-Grid Radiola utilizing the wonderful high-power Screen-Grid Radiotrons.

These two great features—both developed by the research engineers of the famous RCA Laboratories—make the "46" an instrument of superlative quality—and at the price of an ordinary cabinet radio set.

The full rich tones of the bass register—an indispensable requisite of realistic reproduction of orchestral music—are particularly impressive in the performance of Radiola 46.

The faithful tone quality at any volume throughout the musical scale has never before been achieved with so few tubes. And there are other features, making for faultless performance, dependability and long life, that are to be found only in RCA Radiolas.

The most for the money that has ever been put into a radio instrument—that's the verdict of the testing engineers.

The RCA Screen-Grid Radiola is also offered by RCA Radiola Dealers in table type, without the reproducer (Model 44, $110, less Radiotrons); and in combination with reproducer and phonograph—"Music from the air or record" (Model 47, $275, less Radiotrons).

Buy with confidence where you see this sign

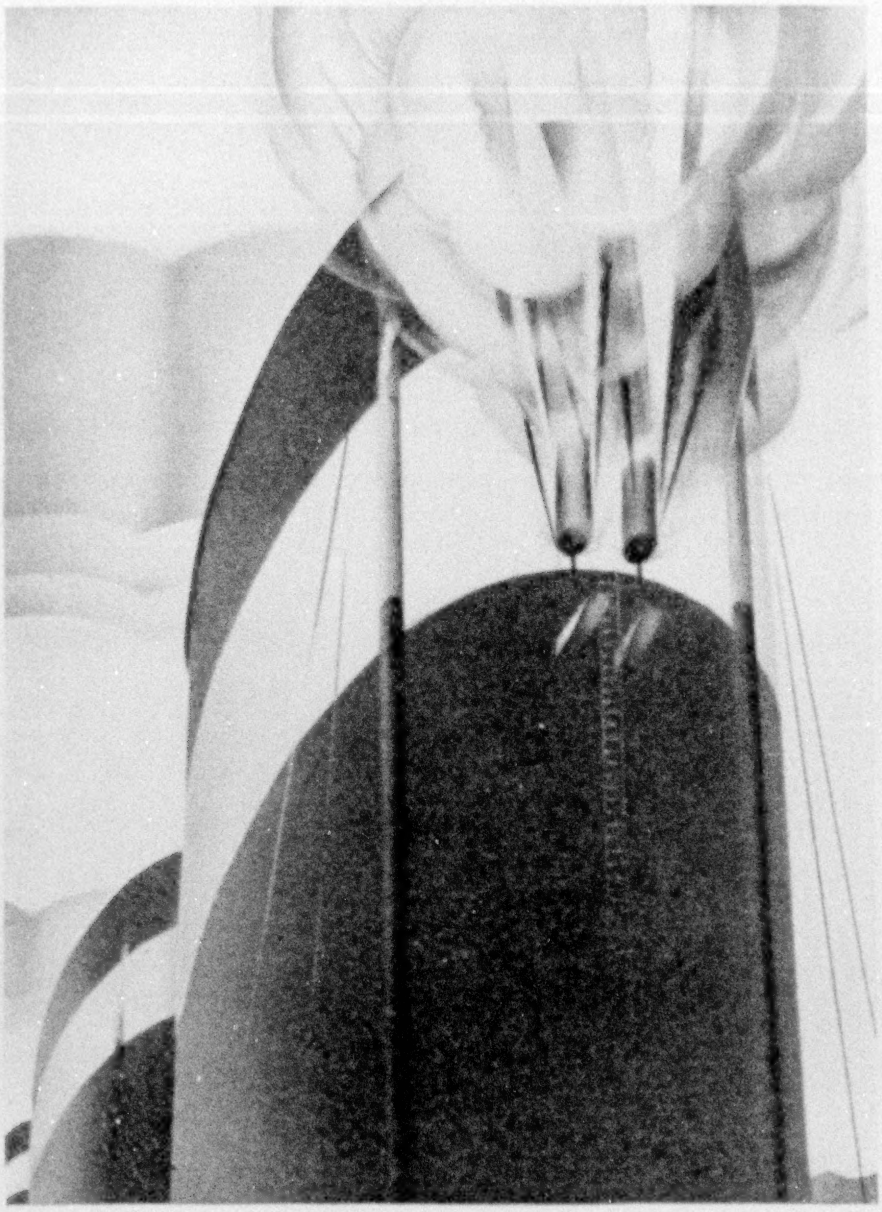
RADIOLA DIVISION
RADIO-VICTOR CORPORATION OF AMERICA
NEW YORK-CHICAGO-ATLANTA-DALLAS-SAN FRANCISCO

RCA RADIOLA

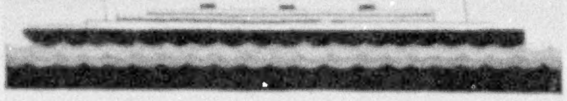
MADE BY THE MAKERS OF THE RADIOTRON

Salute a New Era

. . . in American Maritime Enterprise



At the helm of the great transatlantic fleet of the American Merchant Marine—the United States Lines and the American Merchant Lines—eleven splendid ships—is a new command, that of a vast organized group of loyal, successful American citizens. Under its leadership you are now offered a complete North Atlantic service flying the American flag. A perfect passage for every purse. If you want swiftness enriched by luxury take the Leviathan, world's largest liner. If you seek the sum total of fine accommodations, fine food, fine comfort at low rates choose one of these superb cabin liners . . . George Washington, America, Republic, President Roosevelt and President Harding. Weekly sailings direct from New York to London, too, on the five popular ships of the American Merchant Lines. To Europe? . . . Sail under the Stars and Stripes.



UNITED STATES LINES

For complete information see your local agent or our offices: New York, 45 Broadway; Boston, 75 State St.; Chicago, 61 W. Jackson Blvd.; Cleveland, Hotel Cleveland Bldg.; Detroit, 1514 Washington Blvd.; St. Louis, Jefferson Hotel; Philadelphia, 1600 Walnut St.; San Francisco, 691 Market St.; Los Angeles, 548 S. Spring St.; Minneapolis, 312 Second Ave., S.; Seattle, 4th & University Sts.; Pittsburgh, 705 Liberty Ave.; Washington, 1027 Connecticut Ave.; THESE LINES OFFER A COMPLETE FREIGHT SERVICE—SPECIFY AMERICAN SHIPS FOR YOUR FOREIGN TRADE

See Mount Whitney...
...from Death Valley

THE energizing, warm, dry air of Southern California vies with its vividly contrasting scenic grandeur.

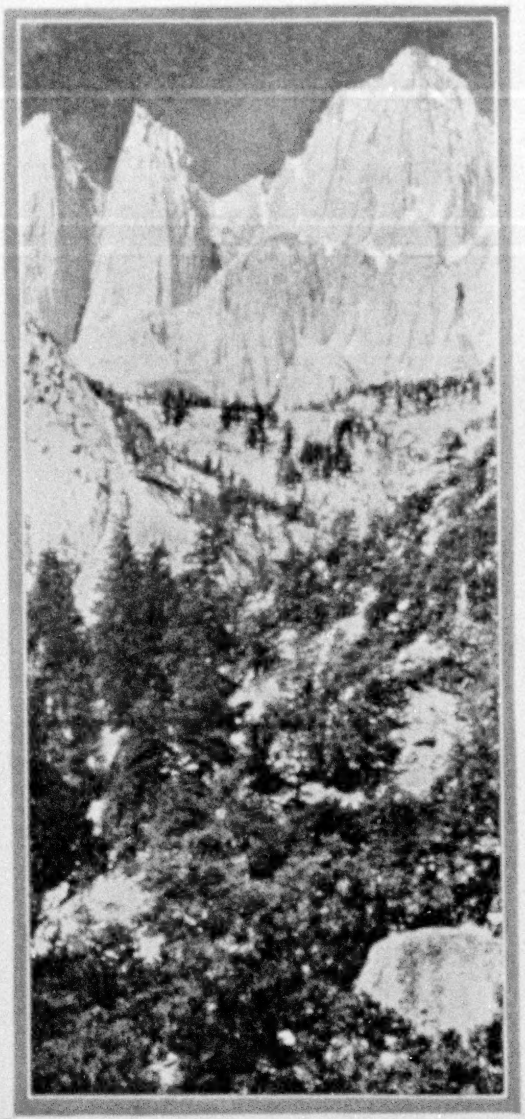
Death Valley, with its curious alkali formations, at its lowest spot is 310 feet below sea level. Eighty miles away, mounting guard over the ice-blanketed High Sierra, towers Mt. Whitney, 14,501 feet high—the highest and lowest spots in the country, a day's ride by train or motor from Los Angeles!

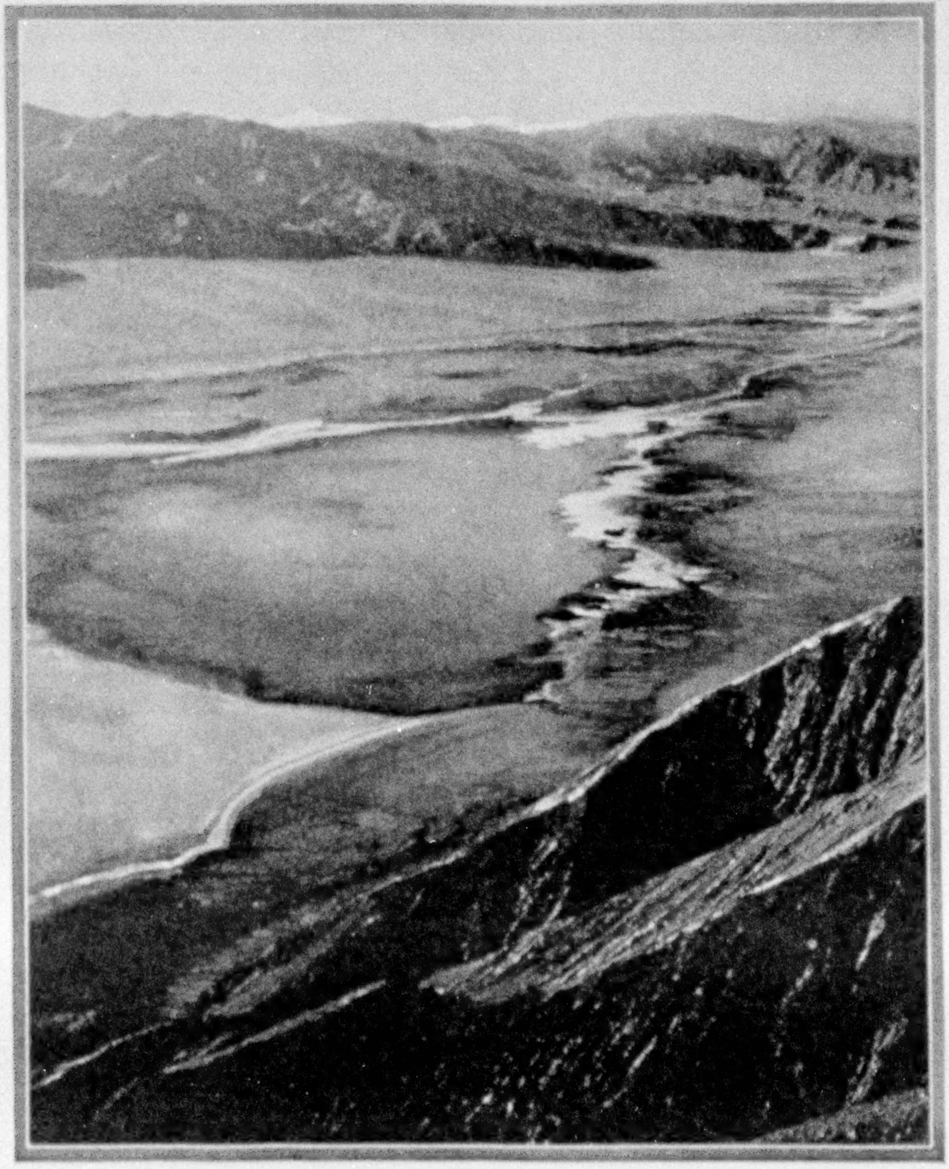
In the balmy sunshine of the valleys, close to this Pacific Coast metropolis, oranges ripen and flowers bloom all "winter" long. Yet, plainly within sight are mile-high mountains, snow-covered much of the season. Drive through orange orchards and you are soon lost in the mystery of the desert! Palm Springs, with its fine hotels, is the mecca of desert visitors.

If you seek entertainment, sixty nearby evergreen golf courses bid you welcome. Play tennis or polo. Saddle sport is popular in the hills. Old Spanish Missions await your visit. Drop over the Mexican line for a fling at Agua Caliente, the Mexican Monte Carlo. *There is everything or nothing to do!*

Los Angeles' smart shops, hotels, theatres and cafes will win your approval. Even Los Angeles' oil fields are an unforgettable picture.

© Willard





The County's agricultural output approximates $95,000,000 yearly.

Come out early. *Fulfil the desire of a lifetime*—enjoy a fall and winter in Southern California's warm, dry, semi-tropic sunshine. Mail the coupon at once for "Southern California through the Camera," containing 71 large pictures in gravure.

Southern California

"A TRIP ABROAD IN YOUR OWN AMERICA"

A Trip Abroad in Your Own America

All-Year Club of Southern California,
Sec. S-10, 1151 So. Broadway, Los Angeles, Calif.

Please send your free book, "Southern California Through the Camera." Also booklets telling especially of the attractions in the counties which I have checked.

☐ Los Angeles
☐ Riverside
☐ San Bernardino
☐ Los Angeles Sports
☐ Santa Barbara
☐ Orange
☐ Ventura
☐ San Diego

Name______________________________
(PLEASE PRINT YOUR NAME)

Street______________________________

City________________State________

Now First
A Completely New
ENCYCLOPAEDIA BRITANNICA

NEW in plan and purpose—entirely recast from cover to cover—the *new* Fourteenth Edition of the Encyclopaedia Britannica is ready. This is the superb "humanized" Britannica which has captured the attention of the whole civilized world.

Three years of intensive effort—the co-operation of 3,500 of the world's foremost authorities—the expenditure of more than $2,000,000 before a single volume was printed—these are merely a few high lights in the preparation of the *new* Fourteenth Edition.

The Last Word in Encyclopaedia Perfection

This *new* Britannica immediately takes its place as the one pre-eminent American work of reference—the last word in encyclopaedia perfection.

Never has there been assembled together in one enterprise such a wealth of learning as is represented by the 3,500 builders of this great temple of knowledge. *All* the universities, *all* the learned professions, *all* the great industries, *all* the pastimes have contributed to the mighty sum.

Note these facts

Cost More Than $2,000,000

Over 15,000 Superb Illustrations

Greatest Knowledge Book Ever Produced

Written by 3,500 of the World's Most Eminent Authorities

Remember—this is a new book. Only a small amount of text—material which could not be improved in any way—has been retained from previous editions.

Knowledge for All

It is a law library for the lawyer, a medical digest for the doctor, a universal history for the historian, a commercial university for the business man—and a compendium of all the arts and sciences for the average reader.

Here is "the cosmos between covers." The whole whirling universe is brought within your grasp, obedient to your hand.

Nothing is too profound to baffle it, and nothing too familiar to escape its informing touch. And on every subject it speaks with the same finality and authority.

All the World's Treasures of Art and Illustration

Among the many new features that will astonish and delight everyone who turns these pages is the wealth and beauty of the il-

FILL OUT AND

Published!

This handsome bookcase table, made of genuine Brown Mahogany, is included with every set of the new Britannica

lustrations. This feature alone marks a tremendous advance. All the world's treasures of art and photography have been laid under tribute to illuminate the text.

"The most exciting book of 1929," asserts a leading critic, and the whole world is echoing that verdict.

This is a Britannica year! Here is your opportunity to join the thousands who will buy this new edition, now, while it is new—fresh from the presses. You owe it to yourself to learn further details regarding this magnificent series of volumes.

> "No book published this year is likely to be more exciting and certainly none more various than the new Britannica. To browse in the new edition is going to be an adventure attended with exciting discovery."—*Henry Seidel Canby, Editor, "Saturday Review of Literature."*
>
> "The new Britannica has been made to reflect the spirit of its age far more than previous editions. Yet the dignity and scholarliness of the contributors, or their actual proficiency in the things they write about, is evidence that the stern standard of former years has not been forgotten."
>
> —*New York Times*

Extremely Low Price

And due to the economies of mass production, the price is extremely low—the lowest in fact at which a completely new edition has been offered for two generations! Easy payments, if desired — a deposit of only $5 brings the complete set with bookcase table to your home.

Send for FREE Booklet

We have just prepared a handsome new 56-page booklet containing numerous color plates, maps, etc., from the new edition and giving full information about it, together with full details of bindings, the present low price and easy payment plan. We want you to have a copy free and without the slightest obligation. **The demand is great—you should act promptly if you are interested in owning a set of the first printing on the present favorable terms. Just fill in the handy coupon and mail it today.**

MAIL *this coupon* TODAY

ENCYCLOPAEDIA BRITANNICA, Inc. NG9-A1
342 Madison Avenue, New York City.

Please send me by return mail, without any obligation on my part, your 56-page illustrated booklet describing the *new* Fourteenth Edition of the Britannica together with low price offer and easy terms of payments.

Name..............................
Address..............................
City.............................. *State*..............

« « PREPARE YOUR CAR FOR WINTER DRIVING

AN OUNCE OF PREVENTION NOW, WILL PREVENT A POUND OF TROUBLE WHEN WINTER COMES

EVEREADY PRESTONE
FOR THE PREPARATION OF THE PERFECT ANTI-FREEZE
Does Not Boil Off
NATIONAL CARBON COMPANY, INC.

Eveready Prestone does not contain any alcohol or glycerine.

9 POINTS OF SUPERIORITY

1. Gives complete protection.
2. Does not boil off.
3. Positively will not damage cooling system.
4. Will not heat up a motor.
5. Circulates freely at the lowest operating temperatures.
6. Will not affect paint, varnish or lacquer finishes.
7. Non-inflammable.
8. Odorless.
9. Economical — one filling lasts all winter.

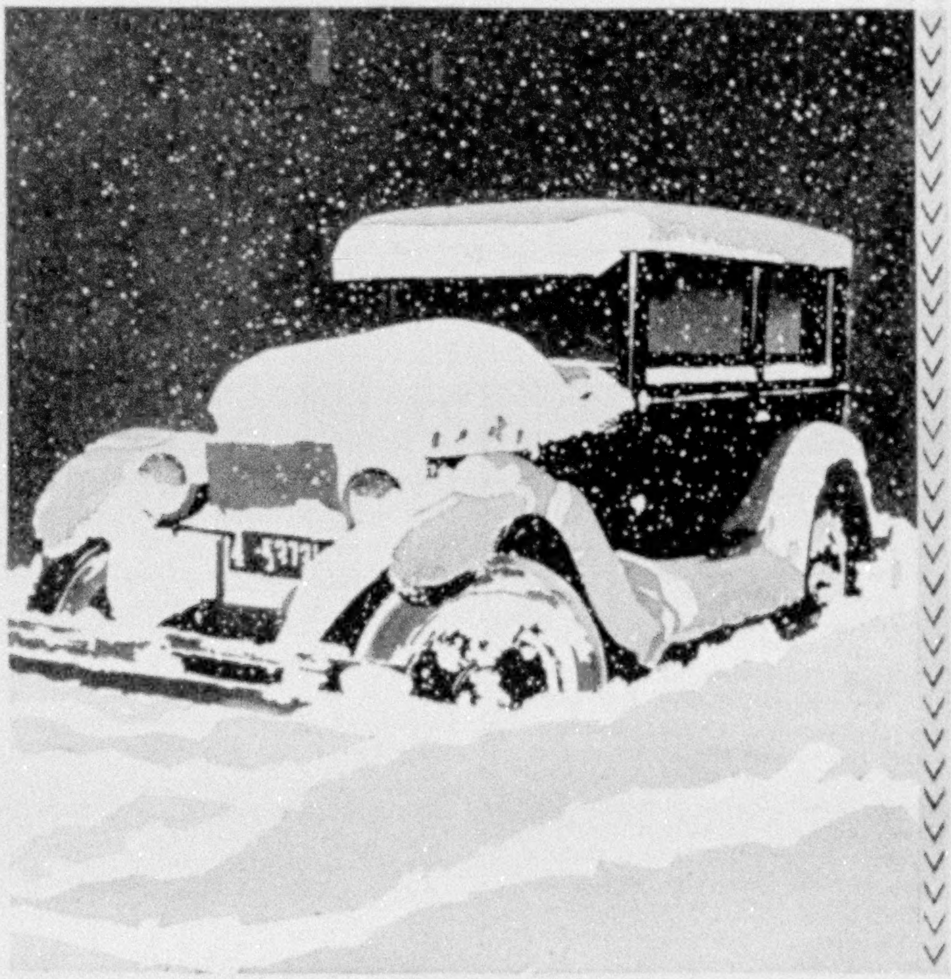
EVEREADY PRESTONE

(TRADE-MARK REG.)

FOR PREPARATION OF THE

PERFECT ANTI-FREEZE

Thoroughly tested and 100% approved by the American Automobile Association.



AFTER a summer's use every car should have some simple, inexpensive service to get it ready for cold weather.

There should be a fresh supply of winter-grade oil in the crankcase, transmission and differential. Spark plugs, ignition cables and battery should be at their best. See that the *cooling system* is *clean* and *tight*, then give your car the perfect protection of Eveready Prestone. One supply protects the car all winter.

Any garage will flush out the cooling system, examine it for leaks, tighten up hose connections or pump glands —look over the complete system for a small fee. The earlier the better, for Eveready Prestone is unaffected by warm weather. One supply of this perfect anti-freeze will last all winter.

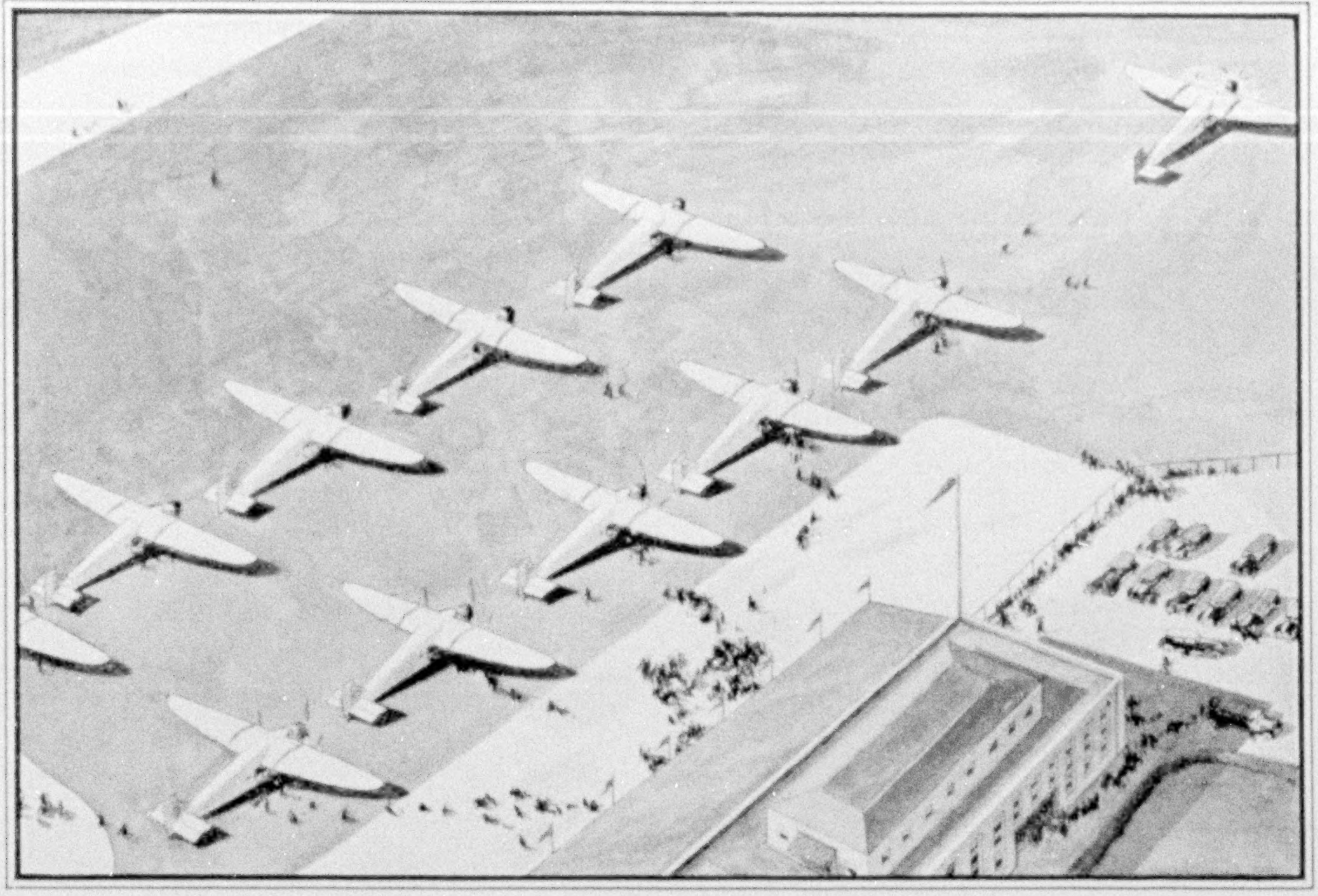
Eveready Prestone is the anti-freeze used by Commander Byrd, by the U. S. Navy and U. S. Army air forces. It is approved by automobile manufacturers and possesses *all* the properties which the National Bureau of Standards has declared essential for an anti-freeze.

It contains absolutely no alcohol and no glycerine — and is a pure, undiluted product.

Be ready before cold weather can harm your car. Have the cooling system of your car serviced and get a supply of Eveready Prestone today.

NATIONAL CARBON CO., Inc.
General Offices:
New York, N. Y.

Unit of Union Carbide UCC *and Carbon Corporation*



THE AIR LIMITED . . . IN 11 SECTIONS

ON TIME! . . . At 5.15, as scheduled, the Chicago air limited appeared high over Detroit, winging at a hundred miles an hour towards the Ford Airport. Following it in close formation were ten additional sections . . . eleven tri-motored, all-metal Ford planes, carrying one hundred and eighteen customers of the Gambill Motor Company, Hupmobile distributors of Chicago. . . .

What would you have thought if you had read this paragraph in a reputable magazine only a few years ago? Pure fiction, of course! Yet this true bit of significant news is no longer startling. For the Stout Air Services have been operating giant Ford planes on passenger flights between Chicago, Detroit and Cleveland on a daily schedule for years. And during 1928 American transport planes flew 10,472,024 miles, carrying 52,934 passengers!

There was an actual increase in passenger traffic of 420% over the preceding year, and over 100% in distance flown!

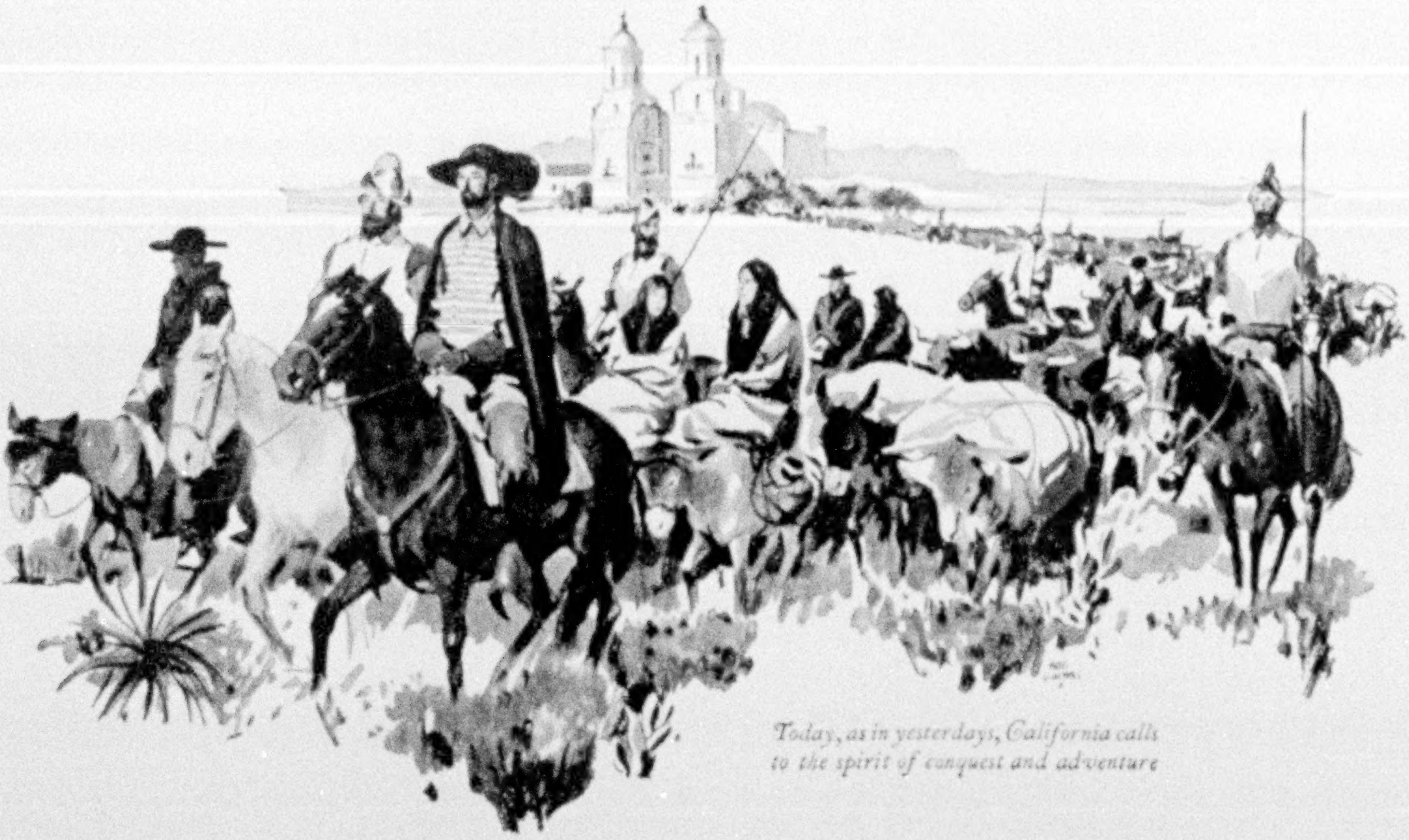
Perhaps the most important factor in the development and prosperity of America has been the improvement of its transportation facilities. When you view the United States from the air, this fact becomes manifest. For fleets of ships, streaking across the water, converge towards sheltered harbors where cities have become focal points from which railroad lines and trunk highways extend towards other cities. Along these routes of steel and concrete and water, cities have risen, communities flourish, the land is rich with growing crops and grazing herds and the plentiful products of mines and oil wells. *But beyond the traveled roads that bind the nation together there is unproductive stillness, a desert emptiness.*

You well know what the coming of the railroad meant to inland places. You know what the deepening of river channels and ocean harbors has done for commerce and navigation. Doesn't your imagination spark at the significance of this new form of transportation that can carry passengers and cargo faster than the wind, in safety and comfortable relaxation?

Is it not of the utmost importance to the commerce and industry of the nation that it is already perfectly feasible for a business man to leave New York at the same time his partner leaves Los Angeles, and meet for a conference in Kansas City in a matter of hours rather than of days?

Even while you are reading this, great fleets of Ford tri-motored, all-metal planes are winging across the skies, up and down the Atlantic Coast, up and down the Pacific Coast, from ocean to ocean, from nation to nation, from metropolises to fields of production and back again. . . . The American people are actually employing the transport plane to speed up the business of the nation!

FORD MOTOR COMPANY



Today, as in yesterdays, California calls to the spirit of conquest and adventure

On to California!

Soldiers of New Spain, marching in 1775 to found San Francisco, pioneered Sunset Route.

"Go", said the viceroy of New Spain, from Montezuma's throne in Mexico, "and found me a city on San Francisco Bay."

In 1775 the expedition started. It moved north out of Mexico and intercepted the Sunset Trail above Tucson. Such was the leadership of Anza, Captain of Tubac, that starting with 240 priests and fighting men, women, and children, he arrived in California with 244! For during the march of incredible hardships, several babies were born.

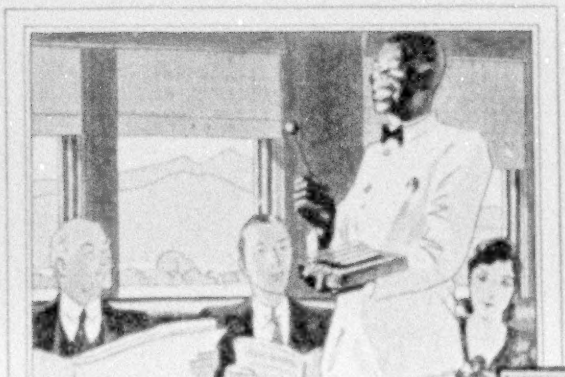
Seven days before the declaration of American Independence was signed at Philadelphia, San Francisco was founded. Its walls were reared by the soldiers of New Spain; their sons were to yield it to the sons of those whose Liberty Bell was then ringing.

Today Southern Pacific's SUNSET and GOLDEN STATE ROUTES join at El Paso to follow much of the pathway of Anza's historic cavalcade. Tales of dead empires, of a nation's epic heroism, cling close to the modern journey. Many historic shrines. New Orleans. San Antonio, where stands the shot-torn Alamo. Houston, where Texas' independence was won. El Paso, gateway to Old Mexico.

The Apache Trail, a one-day motor sidetrip through ruins of the cliff dwellers to fast developing Phoenix. The Arizona guest ranchos, true to the spirit and color of the old west. Palm Springs and Indio, fashionable winter resorts in Southern California's desert oasis. San Diego. Los Angeles. Stopover anywhere.

The remaining 480 glorious miles to San Francisco include 118 miles beside the blue Pacific.

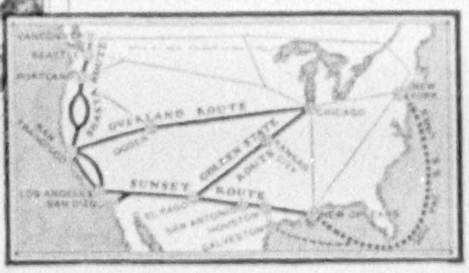
Returning, Southern Pacific offers choice of four great routes. No other railroad offers this choice. Go one way, return another and see the whole Pacific Coast.



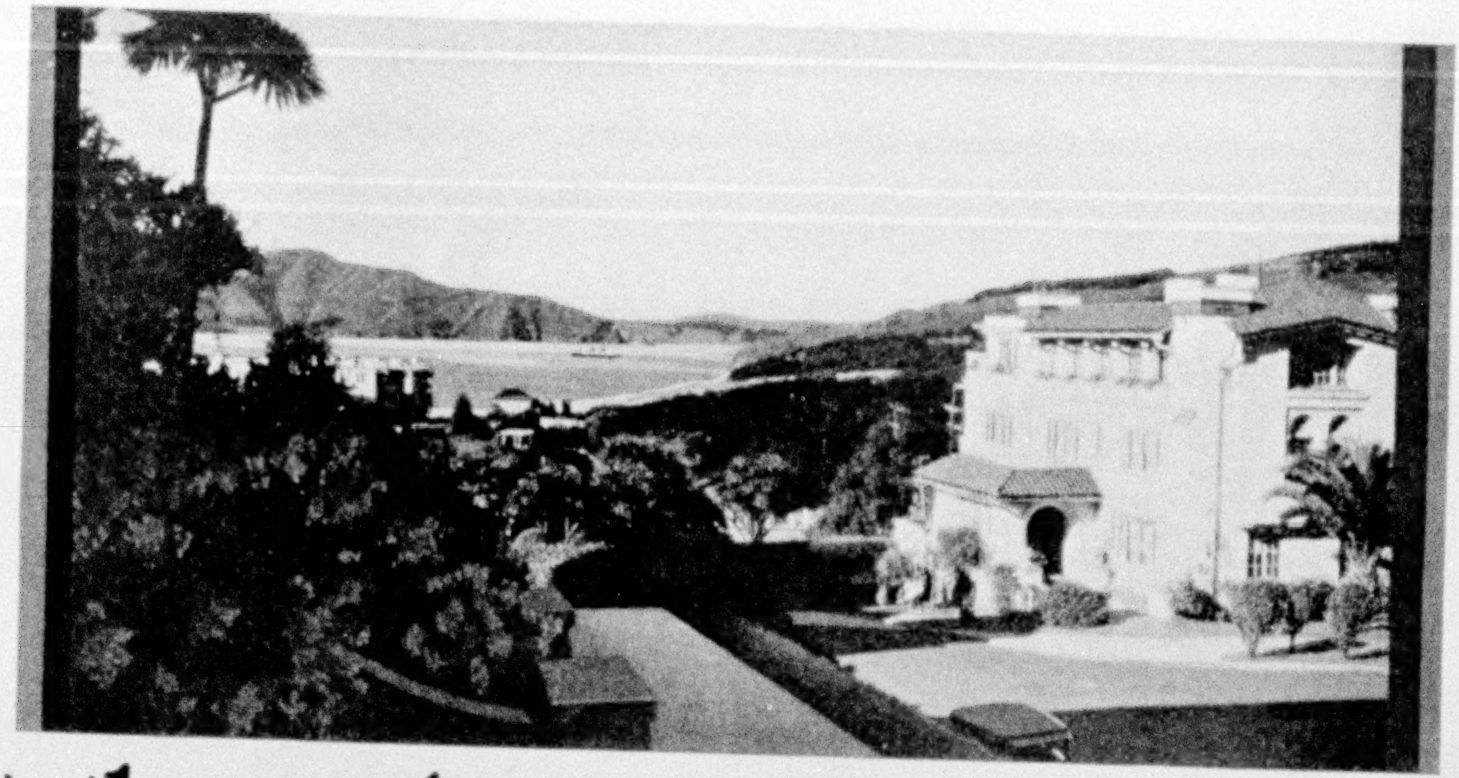
Soft chimes announce the dinner hour

Southern Pacific

Four Great Routes



Send your name and address to E. W. Clapp, traffic manager, 310 S. Michigan Blvd., Chicago, for illustrated book with animated maps, *"How Best to See the Pacific Coast"*



They have CHOSEN to live in California

–A visit may tell you why

Here is a land of joyous living. Thousands have come to find a glorious vacation and have discovered as well the homeland of their dreams. Eternal Springtime makes California an outdoor playground at every season. In winter, children are out in the sunshine the whole day through and men and women enjoy the sports of summer.

San Francisco is gay and joyous at this season. Her restaurants have the flavor of the old countries. Her shops are smart. The social season is brilliant. Music and art are fostered by the keen appreciation of these people.

Winter begins as spring, in San Francisco! Glorious May days—yet nearby are Yosemite and beautiful Lake Tahoe, America's Chamonix, snowy theatres of winter sports. Nearer yet is Monterey Peninsula — spectacular golf courses, beautiful drives, fishing, boating, riding,—and your tan renewed! Excellent duck and quail shooting in the Sacramento Valley.

Delightful vacations—but California offers infinitely more. The lure of the fast developing West! San Francisco is the natural center of the vast wealth and activity of the Pacific Coast... the gateway to lands bordering the Pacific with an awakening market of 900,000,000 people.

There is abundant business opportunity. Riches are no easier here than elsewhere, yet those who are winning success in other sections may find a fuller, finer life here. California invites you this winter to visit the glorious West—and you will love it if you come . . . We shall gladly send you without charge a beautifully illustrated booklet telling you more about California.

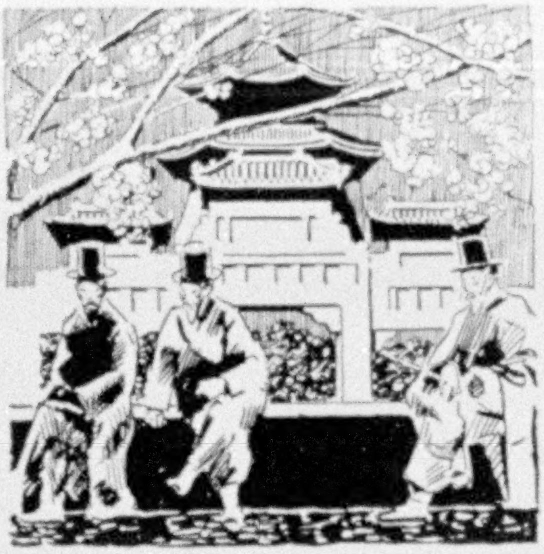
SAN FRANCISCO

IN CALIFORNIA—"WHERE LIFE IS BETTER"

Send now for your copy of the 32-page booklet—profusely illustrated

CALIFORNIANS INC.
Dept. 510, 703 Market Street, San Francisco
You may send the free book "San Francisco —In California—Where Life Is Better"

*Name*________________ *Address*________________



Most inviting of all world cruises— shortest at sea — more complete in sightseeing — moderate in price.

RAYMOND-WHITCOMB

ROUND THE WORLD CRUISE

◆ A world cruise that visits countries in the Far East which other cruises rarely reach—(*Siam*, the Land of the White Elephant; lovely *Formosa; Korea*, the Hermit Kingdom)—and visits generously the countries that are usually visited. Sailing Jan. 21, 1930 on the North German Lloyd liner "Columbus"—fastest liner ever to sail round the world. $2000 and up.

Send for the booklet,
"Round the World Cruise"

Mediterranean Cruise

◆ An annual Raymond-Whitcomb event . . . more complete this winter than ever before. With visits to historic Rhodes, unknown Albania, picturesque Dalmatia, and all the usual cruise-ports in Europe, Africa, and Asia Minor. Sailing Jan. 23, 1930. Rates $1000 and up.

Land Cruises to Mexico
on the Raymond-Whitcomb special
Land Cruise Trains

RAYMOND - WHITCOMB

126 Newbury St., Boston, Mass.

New York, 670 Fifth Ave.; *New York*, 225 Fifth Ave.
Boston, 165 Tremont St.; *Philadelphia*, 1601 Walnut St.
Chicago, 176 N. Michigan Ave.; *Detroit*, 421 Book Bldg.
Los Angeles, 423 W. Fifth St.; *San Francisco*, 230 Post St.

Agents in the principal cities

To countries not visited by other cruises — and completely around South America in two months.

RAYMOND-WHITCOMB

SOUTH AMERICA CRUISE

◆ All South America—down the West Coast, with its ruins of Inca civilization, its snow-capped Andes, and modern cities; through the *Straits of Magellan*, and up the East Coast to *Buenos Aires*, *Montevideo*, *Santos* and matchless *Rio de Janeiro*. It is the only complete South America Cruise. Sailing Feb. 1, 1930 on the S.S. "Samaria". Rates $1250 and up.

Send for the booklet,
"Round South America"

West Indies Cruises

◆ Four winter cruises on new Holland-America 30,000-ton liner "Statendam" . . . notable for the luxury of the Public Rooms, the size of staterooms and generous decks. Sailing on December 21, 1929, January 9, January 29 and February 25, 1930. Rates, $200 and upward.

Land Cruises to California
on the Raymond-Whitcomb special
Land Cruise Trains

RAYMOND - WHITCOMB

126 Newbury St., Boston, Mass.

New York, 670 Fifth Ave.; *New York*, 225 Fifth Ave.
Boston, 165 Tremont St.; *Philadelphia*, 1601 Walnut St.
Chicago, 176 N. Michigan Ave.; *Detroit*, 421 Book Bldg.
Los Angeles, 423 W. Fifth St.; *San Francisco*, 230 Post St.

Agents in the principal cities

DeVry

Moving Picture

CAMERAS *and* PROJECTORS

Bring Visible Memories Back With You

To you who answer the call of far places . . . what a glorious heritage of memories are yours. Do not let time efface them. Preserve them in vision as well as in thought. Wherever you may roam—whatever you may see—point a DeVry and bring forth into view the enchanted hours of yesterday.

Scenery—breath-taking in its grandeur, thrilling scenes of action, adventure in many forms, the passing panorama of crowded cities—will all reappear at your command.

DeVry motion picture cameras and projectors are noted for quality. They feature ease of operation with remarkable performance. A wide range in prices and models.

The DeVry Still Camera provides the utmost in utility and clear photography. Takes 40 still "shots" at one loading. Makes double exposure impossible—prints any size picture.

The DeVry Cine-Tone—the home movie that talks—brings to you perfect synchronization of sound and film.

Magic key to every door that time has closed—The DeVry line awaits you at your dealer's, or write us for descriptive literature. Every DeVry machine unconditionally guaranteed.

DeVry 16 mm. Home "Movie" Camera	**$39.50**
DeVry 16 mm. Home "Movie" Projector	**$37.50** UP
DeVry "Still" Camera	**$22.50**
DeVry Cine-Tone "The Movie That Talks"	**$250.00**
DeVry 35 mm. "Movie" Camera	**$150.00**
DeVry "Still" Projector	**$15.00**

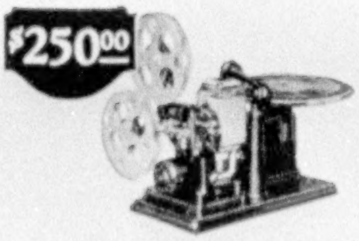
"See Yourself as Others See You"

QRS-DeVry Corporation

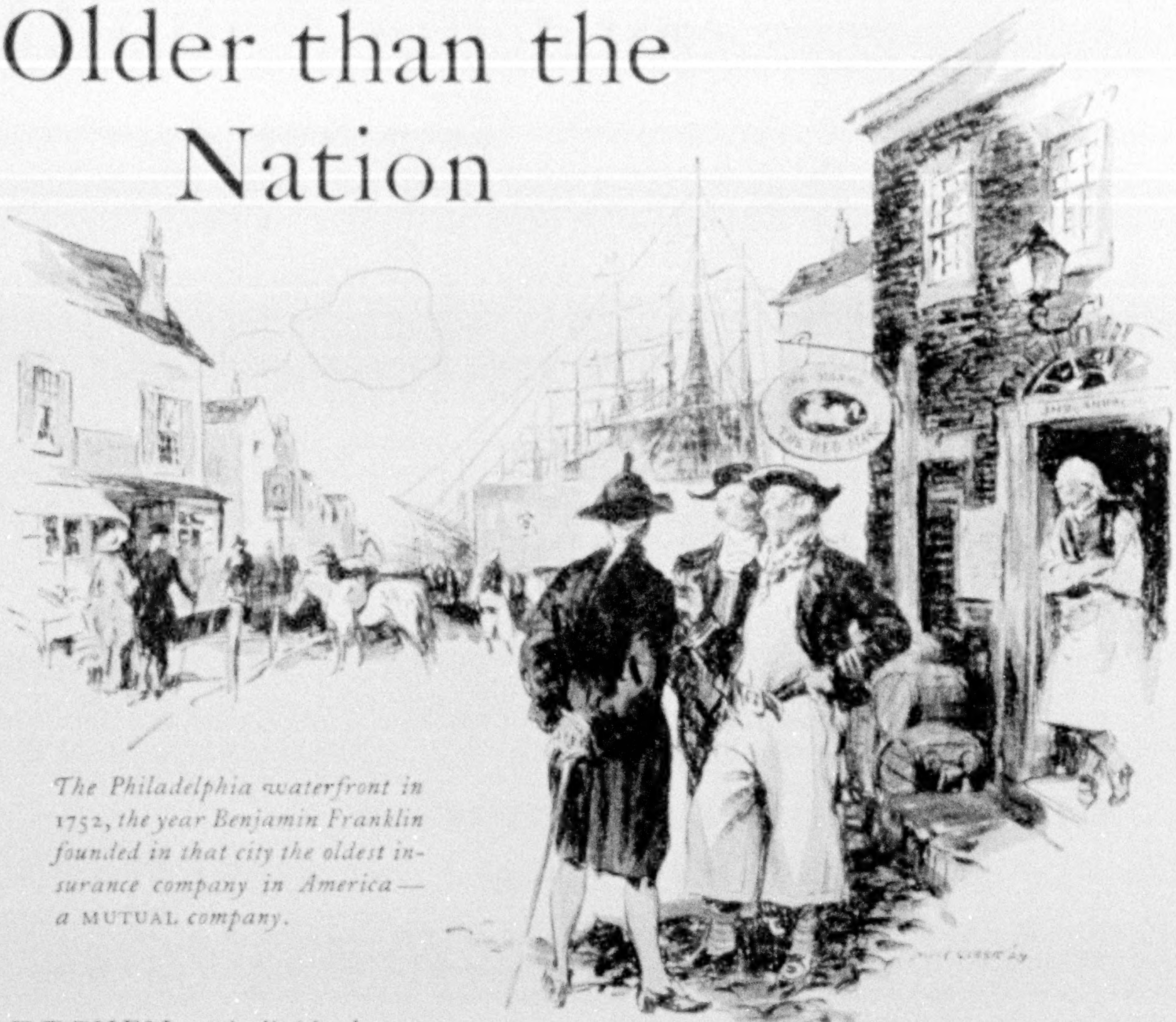
Established 1900

333 N. Michigan Ave.

New York CHICAGO San Francisco



Older than the Nation



The Philadelphia waterfront in 1752, the year Benjamin Franklin founded in that city the oldest insurance company in America— a MUTUAL *company.*

WHEN an individual or a corporation buys insurance in a mutual company, there is the satisfying knowledge that the principles and concepts that underlie a mutual policy have been seasoned and proven by almost two centuries of experience.

Mutual policyholders enjoy also the same direct representation in management that attaches to stock ownership and the privilege of sharing in the welfare of their company through dividends.

That the unusual stability of mutual corporations and the marked advantages of mutual protection are recognized is evidenced by the fact that 85% of the leading industrial organizations are mutual policyholders, and that over 80% of all life insurance is carried by mutuals.

The companies listed below, leaders in the casualty field, have an annual premium income in excess of $76,000,000, and combined assets of over $85,000,000.

A worth-while booklet on mutual casualty insurance will be sent on request. No solicitation will follow. Address Mutual Insurance, Room 2200, 180 North Michigan Avenue, Chicago, Ill.

MUTUAL PROTECTION IS AVAILABLE FOR THESE CASUALTY RISKS:

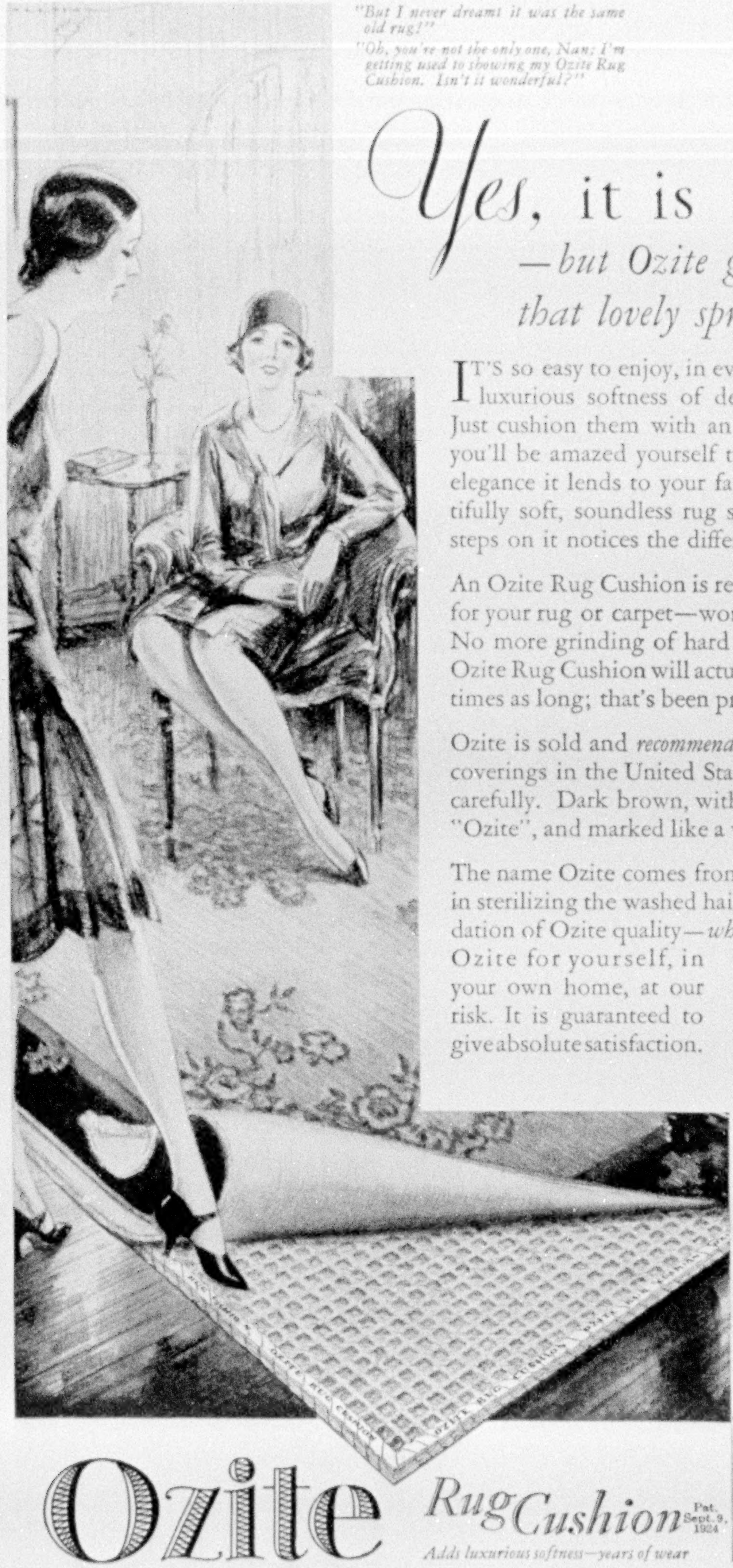
Workmen's Compensation	*Fidelity*
Accident and Health	*Property Damage*
Automobile (all forms)	*Plate Glass*
Burglary and Theft	*Liability (all forms)*

MUTUAL CASUALTY INSURANCE

These Old Line Legal Reserve Companies Are Members of

NATIONAL ASSOCIATION OF MUTUAL CASUALTY COMPANIES *and* AMERICAN MUTUAL ALLIANCE

Allied Mutuals Liability Insurance Co., *New York City;* American Mutual Liability Insurance Co., *Boston, Mass.;* Builders Mutual Casualty Co., *Madison, Wis.;* Central Mutual Casualty Co., *Kansas City, Mo.;* Employers Mutual Casualty Co., *Des Moines, Ia.;* Employers Mutual Liability Insurance Co., *Wausau, Wis.;* Exchange Mutual Indemnity Insurance Co., *Buffalo, N. Y.;* Federal Mutual Liability Insurance Co., *Boston, Mass.;* Hardware Mutual Casualty Co., *Stevens Point, Wis.;* Interboro Mutual Indemnity Insurance Co., *New York City;* Jamestown Mutual Insurance Co., *Jamestown, N. Y.;* Liberty Mutual Insurance Co., *Boston, Mass.;* Lumbermens Mutual Casualty Co., *Chicago, Ill.;* (American) Lumbermens Mutual Casualty Co. of Illinois, *New York City;* Merchants Mutual Casualty Co., *Buffalo, N. Y.;* Michigan Mutual Liability Co., *Detroit, Mich.;* Mutual Casualty Insurance Co., *New York City;* Texas Employers Insurance Association, *Dallas, Tex.;* U.S. Mutual Liability Insurance Co., *Quincy, Mass.;* Utica Mutual Insurance Co., *Utica, N. Y.*



"But I never dreamt it was the same old rug!"

"Oh, you're not the only one, Nan; I'm getting used to showing my Ozite Rug Cushion. Isn't it wonderful?"

Yes, it is amazing

—*but Ozite gives* any *rug that lovely springy softness!*

IT'S so easy to enjoy, in every room in your home, the luxurious softness of deep-piled rugs and carpets. Just cushion them with an Ozite Rug Cushion. And you'll be amazed yourself to see what an added air of elegance it lends to your familiar furnishings. A beautifully soft, soundless rug spells luxury! Anyone who steps on it notices the difference.

An Ozite Rug Cushion is really a fine, thin hair mattress for your rug or carpet—wonderfully *comfortable,* restful. No more grinding of hard heels on fabric, either. An Ozite Rug Cushion will actually make any rug wear three times as long; that's been proved.

Ozite is sold and *recommended* in all stores selling floor coverings in the United States and Canada. Examine it carefully. Dark brown, with orange binding imprinted "Ozite", and marked like a waffle, in squares.

The name Ozite comes from the patented process used in sterilizing the washed hair with ozone, the very foundation of Ozite quality—*which cannot be imitated.* Prove Ozite for yourself, in your own home, at our risk. It is guaranteed to give absolute satisfaction.

Send coupon for booklet telling of these added advantages:

1. Ozite never loses its live springiness.
2. Stays flat—will never mat, lump, creep, or curl.
3. Will outwear a dozen rugs.
4. Needs cleaning (with vacuum) but once a year.
5. Is absolutely mothproof and fireproof.
6. Remains clean, sanitary, odorless.
7. Softens the sound of footfalls.
8. Evens old floors, blankets cold ones.
9. Can be taken up and relaid like a rug.
10. Makes laying of rug or carpet easy.

CLINTON CARPET COMPANY
(American Hair and Felt Co., Mfrs.)
130 N. Wells St., Chicago

The Proper Care of Rugs and Carpets

CLINTON
CARPET CO.
130 N. Wells Street, Chicago

Please send me a free sample of Ozite Rug Cushion and your booklet, "The Proper Care of Rugs and Carpets."

Name

Address

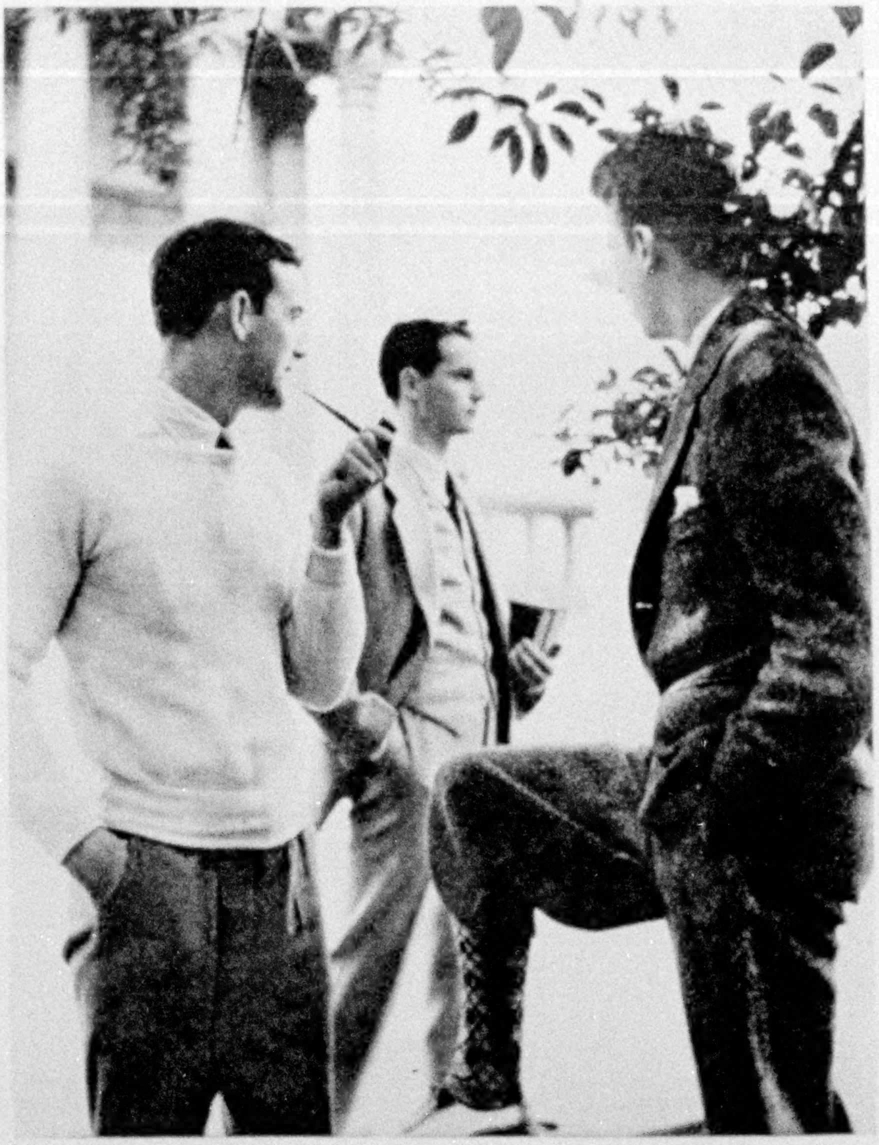
City State

Ozite *Rug Cushion* Pat. Sept. 9, 1924

Adds luxurious softness—years of wear

THE STANDARD RUG AND CARPET CUSHION IN EUROPE, CANADA, AND THE UNITED STATES

Not Bad — *for a Freshman*



To upper-class men a freshman is merely a question mark . . . .
Will he make the grade?

The key that unlocks the door of a full college life is *time.* Time to make friends, time for sports, time to take part in the many activities the missing of which means obscurity.

The hardest-working man is the one who never gets anything done—who is always hustling to catch up. He hurries his task and then does it over. Misses today's fun doing yesterday's work. Even if he doesn't flunk out, he'll get mighty little out of the four years except disappointment and consciousness of failure.

You probably suspect that we are trying to sell you a Corona. Nothing of the sort. We are just trying to convince you that you need a Corona. That's different.

Coronatyping not only saves an enormous amount of time; it induces accuracy, good spelling, better construction of sentences, clearer thinking. It is the modern, efficient way.

You will discover Corona a big help on all written work, notebooks and themes. Most professors prefer typed manuscripts to handwritten, and grade accordingly. There are many outside competitive activities where your chances for success will be increased 33⅓% if work is Coronatyped.

The latest Corona is a remarkable mechanical achievement—the product of twenty years of engineering effort devoted to perfecting a compact typewriter for personal use. It is small in the sense that a fine watch is small. It has everything and does everything. Its touch is remarkably easy, and its operation simple. Coronatyped work is always admired. More than a million Coronas are giving satisfaction.

You will be amazed to discover how quickly you can learn to operate a Corona. In a week you will be able to type as fast as you can write. Thereafter operation becomes automatic—thoughts come more rapidly, sentences shape up into good rhetorical form. The crudities of construction due to handwriting disappear.

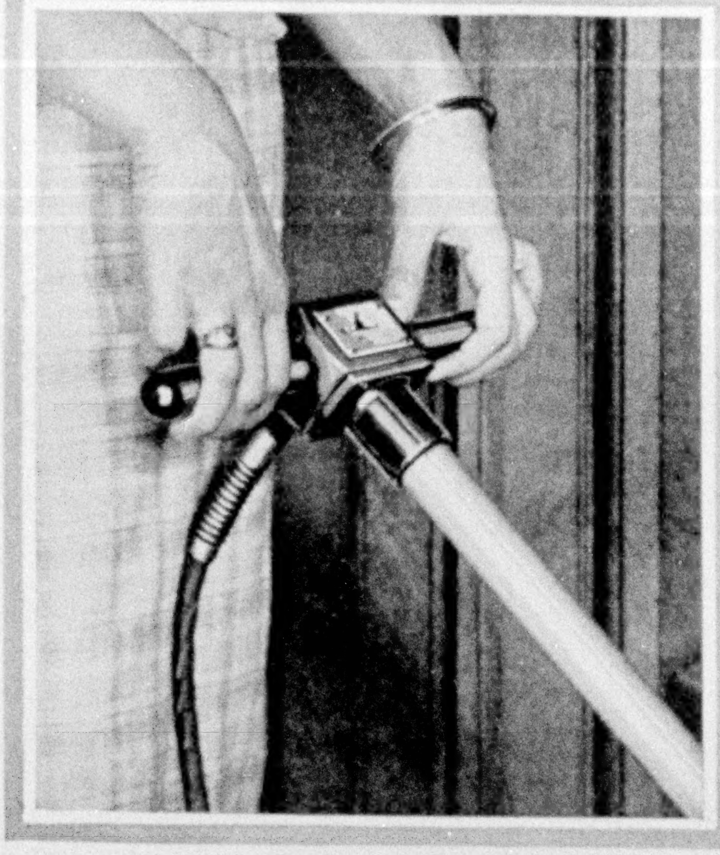
Look Corona over at our local dealer's store. Suggest that you would like to try it for a day or two. Arrange to pay for it gradually if you wish. Or possibly the family will come through, considering how vital Corona is to your success.

Corona, with standard keyboard, costs $60. Corona Special, with three row keyboard (a splendid machine), costs $39.50. Glad to send literature.

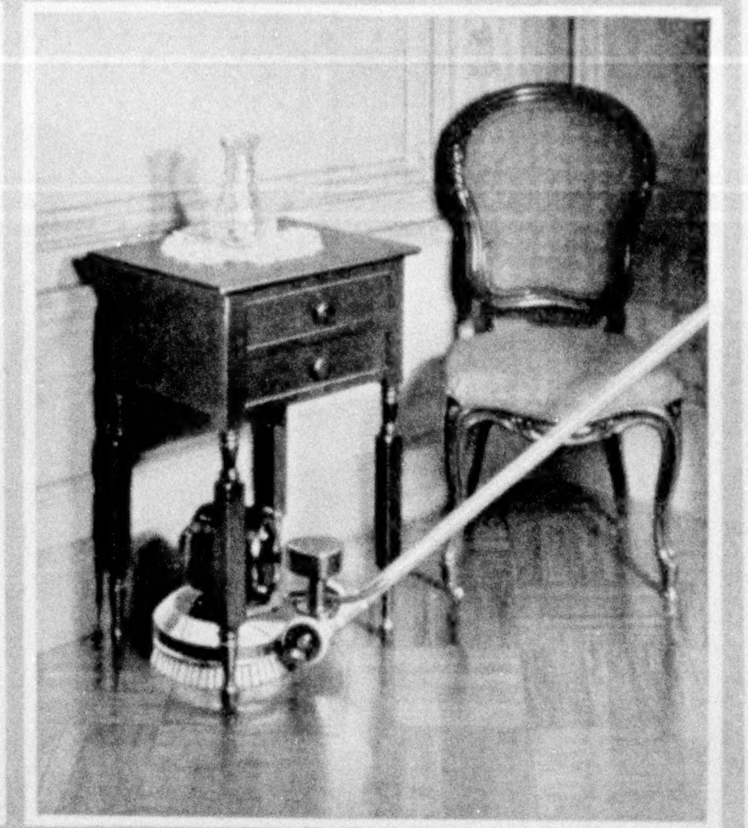
L C Smith &
Corona Typewriters Inc, 51
Madison Avenue,
New York City.

CORONA

A UTILITY OF MODERN LIVING



No strength is needed to operate the machine. You guide it by raising or lowering the handle



Once your floors are refinished, the Ponsell keeps them in perfect condition

SCRAPE and REFINISH YOUR FLOORS *yourself*

This amazing little machine does all the heavy work—scrapes, sandpapers, refinishes—then keeps your floors in perfect condition forever after—costs but a fraction of one refinishing job.

NOT a mere shining up of the old homely surface, but an entirely new surface . . . applied after scraping off the old one.

The cost is but a fraction of ordinary methods . . . much less than a floor contractor's charge.

An amazing new machine which plugs into an electric-light socket like a vacuum cleaner, and requires no more skill to operate, enables you to do the job yourself. It takes off completely the old varnish or shellac . . . sandpapers the floor to velvet smoothness . . . vigorously rubs in coats of wax . . . then polishes the wax to a lovely luster.

The change in your floors astonishes you. *They look like new.* Not only that—but they stay that way, for the machine takes care of them forever after. A few minutes occasional polishing, an annual or semi-annual rewaxing (operations absurdly easy), and your floors become the constant envy and admiration of your friends.

In addition, the Ponsell Floor Machine takes care of your other floors. It gives linoleum a luster surpassing anything you have ever known . . . a surface so immaculately smooth that dust and dirt have a hard time sticking to it. The machine scrubs tile, cement, or any other kind of floors as they never could be scrubbed by hand, and without the least splashing.

We have branch offices in 24 cities ready to serve you. Upon request, we offer a FREE demonstration in your own home. Or if you are too far from our nearest branch, a 10-day FREE trial. But first write for a complete description of this marvelous little machine, and what it does. Tear off the coupon now as a reminder, and then mail to us. We promise you an answer promptly.

Ponsell Floor Machine Co.

220-230 West 19th St., Dept. N.G. 10, New York City

Please mail me complete information regarding your Electric Floor Machine. This does not obligate me in any way whatever.

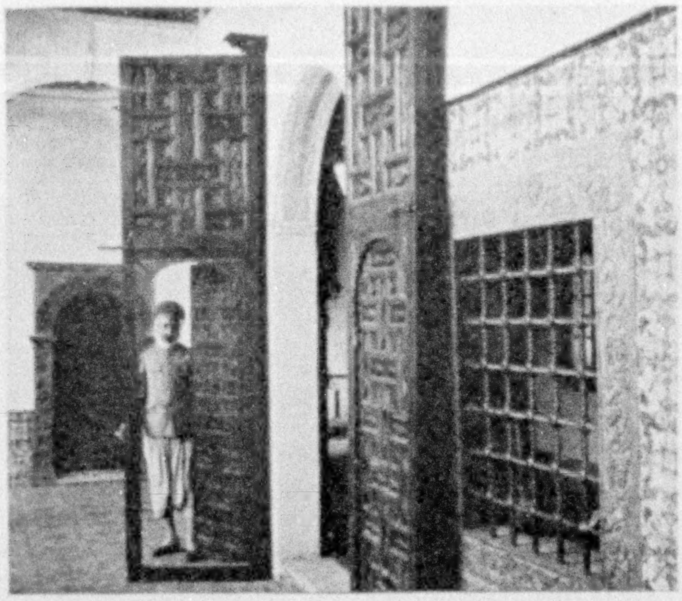
Name..

Address..

City.......................... State..........

N.G. 10-29

EGYPT . . . and the MEDITERRANEAN



Algiers

The Mauretania en route for colour . . .

Paris gone tropic . . . dapper French soldiers threading their way through throngs of Arabs . . . the muezzin's whine to prayer . . . the latest scrap of song from a Montmartre music hall . . . veiled women . . . chic Parisians eating the delectable *couscous* up in Khasba, the old city . . . continental gaiety on the incredible edge of Africa.

The Mauretania calls at Algiers with the same discrimination for the colourful moment that distinguishes her entire Mediterranean itinerary. She has the old comfort, spaciousness, and indefinable air that made her so popular. She is remodelled and beautifully equipped. And she calls at Madeira, Gibraltar, Villefranche, Naples, Athens, Alexandria and Haifa when each of these ports is most glamorous and interesting.

The Mauretania sails from New York February 20th . . . returns via Southampton.

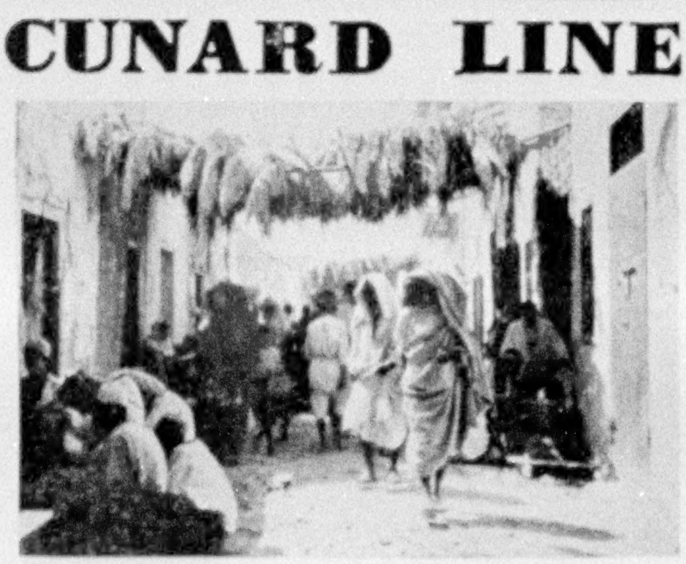
N. Y. to Madeira, Gibraltar, Algiers, Villefranche and Naples	$275 up.
N. Y. to Athens, Haifa and Alexandria .	$350 up.

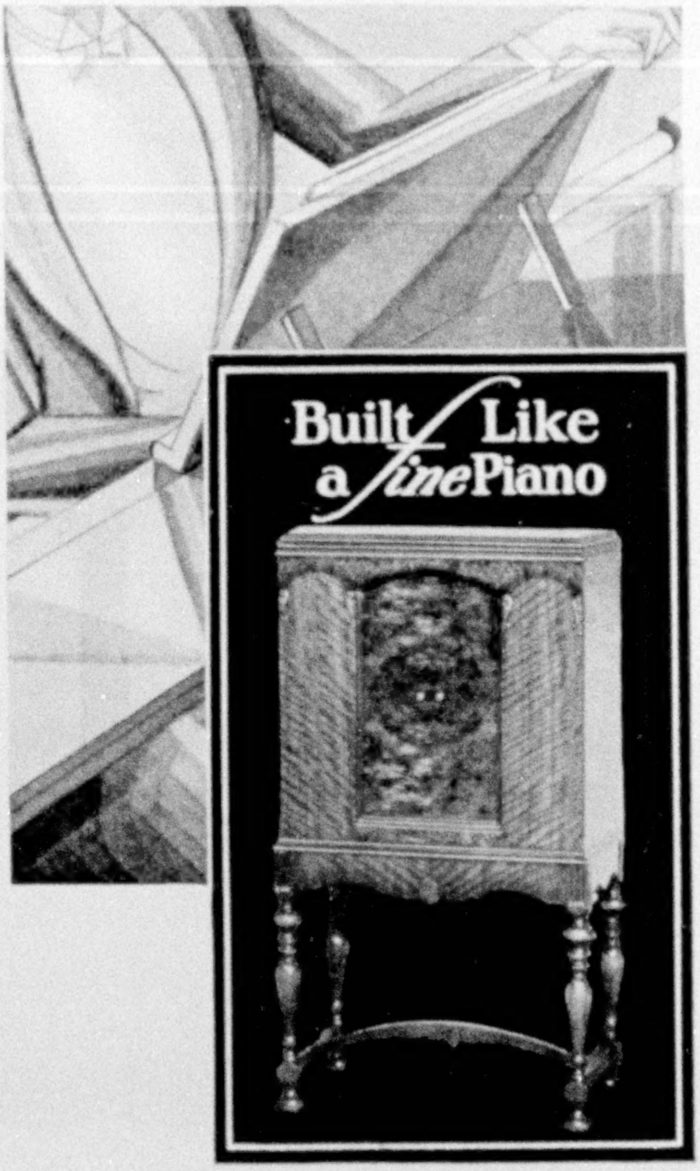
WEST INDIES CRUISES

Ten West Indies Cruises . . . cleverly planned . . . romantically scheduled . . . 9, 12, 16, 18 or 26 days.

Minimum rates from $150 up.

CUNARD LINE





Built Like a Fine Piano

SEE IT! Realize a new beauty in radio—a subtle difference in finesse of detail—a warmer, deeper brilliance of finish.

Hear it! Listen to dynamic reproduction in its purest and loveliest phase. Let the dial be your gateway to a new-found pleasure in radio performance.

Own it! Feel the indescribable satisfaction of knowing that you possess the nearest approach to mechanical and visual perfection in radio. Several models—all new—await your inspection. You can buy with confidence from the specially appointed dealer, identified by the Bush & Lane Shield.

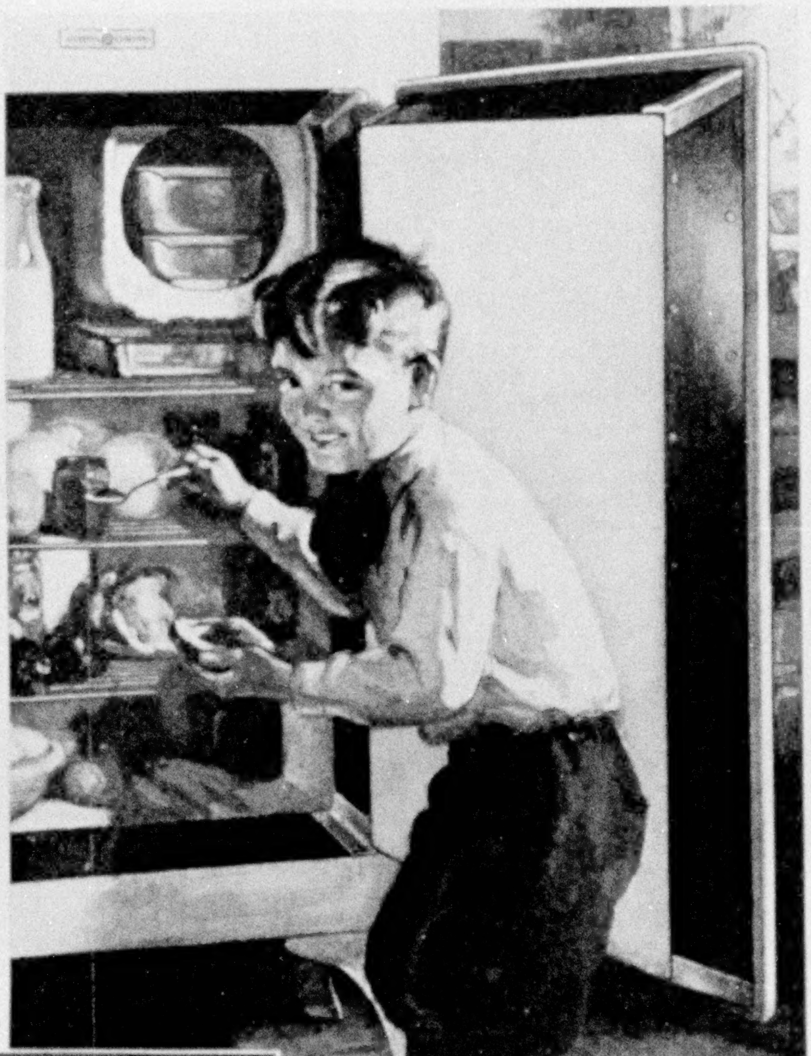
BUSH & LANE PIANO COMPANY
HOLLAND, MICHIGAN

Write for illustrated brochure, complete with information and prices, showing all the new models of Bush & Lane Radio.

Bush & Lane RADIO

The food he eats is the man he'll be!

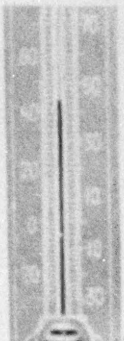
Guard his food by safe refrigeration—keep it below 50° always. ✓ ✓ ✓



A CUT finger brought tearfully to you for first aid. The busy sound of small feet clumping down the stairs. A tousled head and one bright eye peeping at you from the bed clothes. He seems so little now—but the years hurry by.

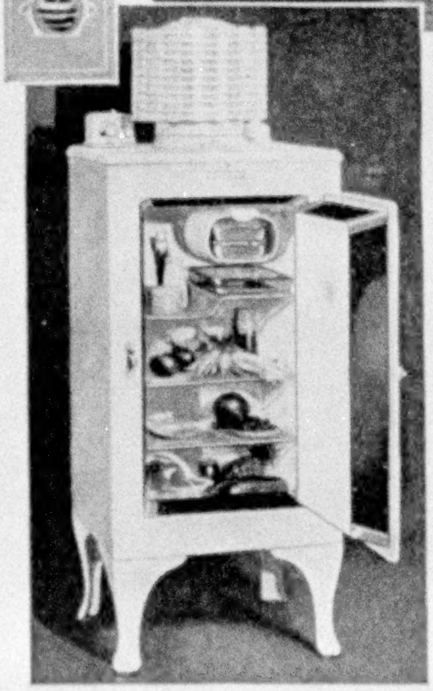
What will he be like when he grows up? Will he be tall and strong? Will he be—happy? So much of his future depends upon the food he eats. For, good food builds good health—and health is the foundation of a successful life.

Nothing can give you greater assurance that his food will be wholesome and healthful than a General Electric Refrigerator. Quietly, day and night, it automatically keeps food safely below 50 degrees, the temperature which medical authorities agree to be the danger point. At higher temperatures, bacteria thrive, food becomes unwholesome—often dangerous.



The General Electric Refrigerator has all its mechanism hermetically sealed in a steel casing, placed on top of the cabinet. It is quiet in operation—never needs oiling. It has an accessible freezing regulator. It has an all-steel cabinet—warp-proof, rust-proof, sanitary.

For a copy of Dr. Royal S. Copeland's book on Refrigeration and Health, write Sec. R-10, Electric Refrigeration Dept., General Electric Co., Hanna Building, Cleveland, Ohio.



Consider this record before you buy a refrigerator

More than 350,000 homes are enjoying the convenience, economy and protection of General Electric Refrigerators. And not one owner has ever spent a single dollar for repairs or service. This is a record in the industry. No wonder General Electric owners consider their refrigerators the very best of investments.

GENERAL ELECTRIC

ALL-STEEL REFRIGERATOR

Good-bye …and don't take any wooden nickels

In the trite pleasantry of this farewell there lurks unsuspected wisdom. Even one's travel funds can prove on occasions quite as inefficacious as "wooden money"—though never when one carries American Express Travelers Cheques, for they are safe and spendable the world over. These blue travel funds carry an automatic introduction to valuable personal service in foreign lands.

Uniformed men are at the docks and stations to help with baggage, passports, and hotels…to furnish helpful local information and to make the trip more enjoyable.

Issued in convenient denominations of $10, $20, $50, and $100 and cost 75c for each $100. Sold by 22,000 banks and at American Express and Railway Express Agency offices.

for safety and spendability

AMERICAN EXPRESS

Travelers cheques

Steamship tickets, hotel reservations, itineraries, cruises and tours planned and booked to any part of the world by the American Express Travel Department

GREAT WHITE FLEET

Seeing *the* lands they read about *in* books

Down in the romantic Caribbean, following the sea-trail of the English and Spanish explorers, seeing for themselves the colorful lands they've read about. Sleepy little port towns, haunted by stirring memories of Don and buccaneer.

Havana, always ready to play…Santiago…Kingston and Port Antonio, peeping from their Jamaica palms…Cristobal, guarding the Atlantic entrance of the Panama Canal and Panama City…Port Limon in Costa Rica…Cartagena, Santa Marta, and Puerto Colombia, the three Colombian graces…Puerto Barrios and Guatemala City in ancient Guatemala…Belize in hustling British Honduras…Puerto Castilla and Tela in orchid-bedecked Spanish Honduras.

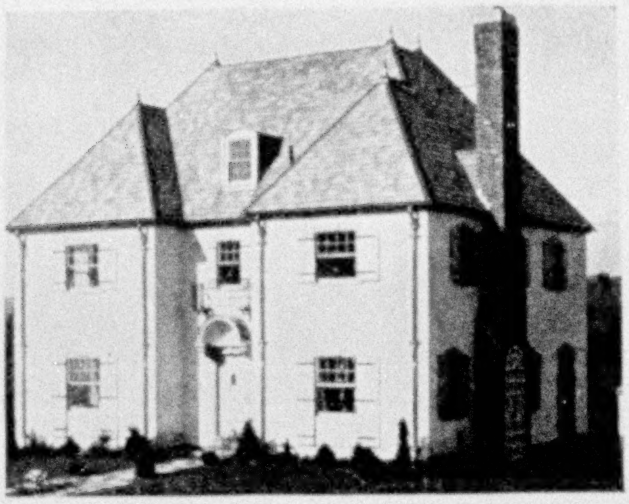
Great White Fleet liners leave New York twice weekly and New Orleans three times weekly. Cruises from 9 to 24 days. Only first class passengers carried. All shore motor trips, hotel and railway accommodations included in price of your ticket. Write for complete information to

Passenger Traffic Department
UNITED FRUIT COMPANY
Steamship Service
Room 1624, 17 Battery Place, New York City

CARIBBEAN
via
GREAT WHITE FLEET

These J-M shingles actually improve *with* age

Your Home once roofed with Johns-Manville Asbestos Shingles is Guarded for all time from firebrands and weather



Johns-Manville Colorblende Asbestos Shingles on a residence at Worcester, Mass. Designed by Harold J. Beandette. Shingles furnished by W. H. Sawyer Lumber Co.

SOME roofings have a fair length of life, but how many are like Johns-Manville Asbestos Shingles—literally permanent? How many will stand up under temperatures which will raise them to white heat? How many will last unharmed, undecayed, strong and beautiful through generations?

Such service you can expect from Johns-Manville Asbestos Shingles. These everlasting shingles defy time and the elements. Made by uniting asbestos fibres and Portland Cement under enormous pressure, J-M Asbestos Shingles combine every quality necessary for complete roofing satisfaction.

You can heat a J-M Asbestos Shingle white hot without injuring it. In fact, the extremes which these remarkable shingles will stand far surpass any service which roofs ever encounter in actual use. Here, indeed, is outstanding proof of the superstrength and durability of J-M Asbestos Shingles.

Yet these shingles are not alone a utility product. Tinted with a wide range of colors and finished in various textures, and thicknesses, J-M Asbestos Shingles enable you to select a roof of warm, delightful colors exactly suited to your home and its surroundings. Whatever your roof requirements may be—you will find Johns-Manville Asbestos Shingles entirely correct, modern and pleasing.

Costs are Actually Lower

Home owners sometimes think that the best costs more. This is not true of J-M Asbestos Shingles. A recent survey of 39 cities in 19 states from coast to coast shows that the average cost of J-M No. 70 Asbestos Shingles is only 12.2% more than the average cost of 18" stained cedar shingles, including labor. When you roof or re-roof with J-M Shingles, the first cost is the last—over a ten year period, the repair-less service of a J-M roof actually costs less.

J-M Roofs are Registered

The roofers and contractors who apply J-M Asbestos Shingles are experts—trained and experienced in their work. Every purchaser of a J-M Asbestos Shingle roof is supplied by the applier with a Johns-Manville Certificate of Registration. A duplicate is filed at the J-M Registration Bureau, thus making your roof a matter of record. Be sure that you receive this certificate. This is your guarantee that you are getting genuine J-M Asbestos Shingles.

What Other Roof Will Improve *With Age?*

The Southern Testing Laboratories of Jacksonville, Fla., in 1927, tested J-M Asbestos Shingles which were laid in 1911. The *exposed* parts of the 16-year-old J-M Shingles were stronger than the parts unexposed to the weather. These exposed parts averaged 10% stronger than an equal thickness of a *new* shingle from stock.

New J-M Shingles *gained 9% strength* after two months' weather exposure.

Write us about Free Estimate

Mail the coupon below. Without obligation we will inspect your roof through our local representative and furnish you with an estimate for ending roofing expense forever. We have never known of a J-M Asbestos Shingle roof wearing out.

Send for our New Book of Roofs. In it you will find the *right* roof for *your* home.

Johns-Manville

RIGID ASBESTOS SHINGLES

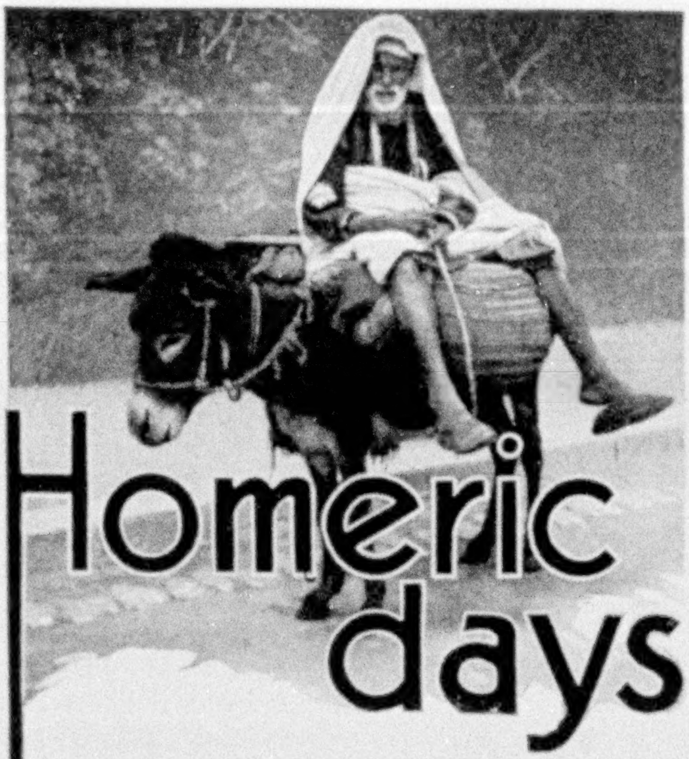
JM

JOHNS-MANVILLE CORPORATION
New York Chicago Cleveland San Francisco Toronto
(Branches in all large cities)

☐ I am interested in a free roof inspection and estimate.
☐ Please send me the New Book of Roofs.

Name ....
Address ....
....

RS-41-40



A story-book world. A kaleidoscope of Bazaars, camels, snake charmers, jugglers. The mystic chants; the swaying, praying Moors, Turks and Soudanese. The color, the odor, the gay costume; the strange primitive life of the Orient. You are held spellbound. Then to the site of the once-mighty City of Carthage. The crust of the great Amphitheatre where once were housed "300 War Elephants and 5000 Horses".

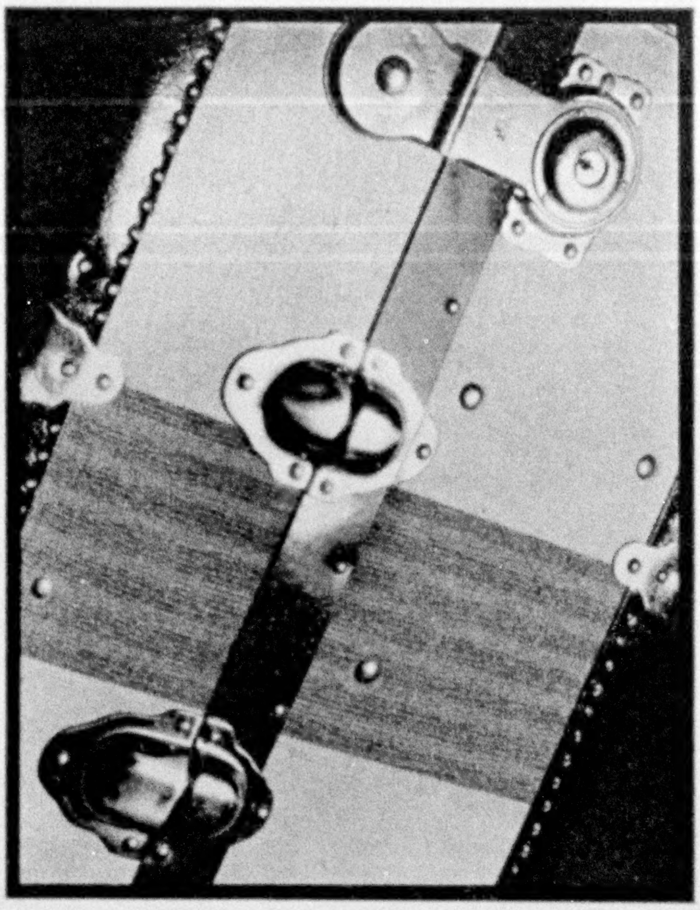
Mediterranean
Cruise Supreme

from New York January 25th next

The Homeric—one of the World's foremost ships—with 115 rooms connected with private baths—the largest steamer to the Mediterranean—takes you to all the right places at the right time—14,000 miles—65 days.

Casablanca, Palma-Majorca, Barcelona, Valetta, Larnaka, Nicosia and Ajaccio are new ports added to an already wondrous itinerary. Two weeks in Egypt—the Holy Land; generous stay-over privileges. Return is via England on the Majestic, Olympic or Homeric.

Thos. Cook & Son
585 Fifth Avenue, New York
Philadelphia Boston Baltimore Washington
Chicago St. Louis San Francisco Los Angeles
Toronto Montreal Vancouver
in co-operation with
Wagons-Lits Co.



A good trunk is Art to us

OUTWARDLY we are normal human beings. But put us in eyeshot of a trunk, and we go right off our heads.

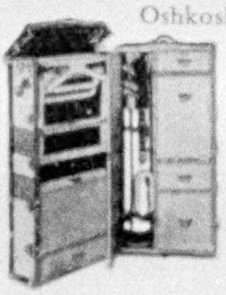
Show us a trunk shoddily made, and we feel out of sorts for a week. Show us one honestly constructed and built to *work*, and we make soft, purring noises.

That's why we make Oshkosh Trunks *unnecessarily strong*. It pleases us to know that *your* Oshkosh will last longer than you expect it to.

The corners, for instance, are constructed to stand incessant pounding. You will never find a cardboard bottom in a drawer. The walls of the trunk are built throughout of three layers of veneer and two layers of hard vulcanized fibre.

We invite you to take advantage of these little idiosyncrasies of ours by buying an Oshkosh when you next buy luggage. Or write us (addressing 531 High Street, Oshkosh, Wisconsin) for a booklet that describes them. They cost very little more than ordinary trunks, yet they give so much more in service and satisfaction!

OSHKOSH TRUNKS
THE OSHKOSH TRUNK COMPANY
Oshkosh, Wis., and 8 E. 34th St., New York City



This Oshkosh Golfer's Wardrobe has a special compartment for your golf bag and clubs, a roomy shirt drawer, hat carrier, shoe box, collar tray, and laundry bag. It is covered with the famous Oshkosh-Cord duck.

An Endless Adventure with FILMO

A few fleeting, glorious days . . . and your trip is ended . . . or it may last forever. How? Take along a Filmo and bring back a movie story of the strange, the new, the beautiful, that you can preserve in no other way.

There is a Filmo Camera for everyone, from the slender, patrician Filmo 75 up to the Filmo 70-D, the new star in personal moviedom, that gives you three lenses instantly ready for use, and seven film speeds for the fastest or slowest of movies. Through its new, variable spy-glass viewfinder you see the exact field area of the lens you're using, whether it's a "close-up" or a telephoto picture you're making.

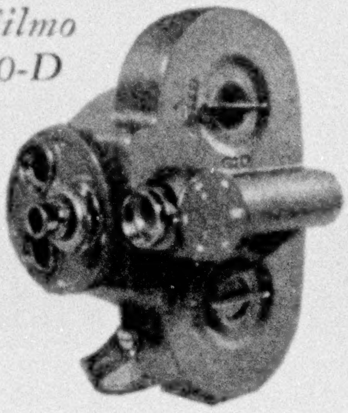
Exhibiting the same precision and dependability as in the Bell & Howell professional cameras which Hollywood has known for 22 years, Filmo Cameras for personal use are preferred by travelers the world over . . . preferred for their amazing flexibility, simplicity of operation, and positive photographic results.

It's just a question of which Filmo you want. Ask your dealer to show you the new Filmo 70-D, Filmo 70-A and Filmo 75. Or write to us for literature and the illustrated booklet, "What You See, You Get."

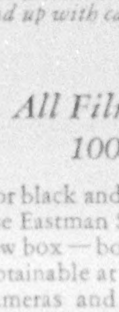
Bell & Howell Co., *Dept. J*, 1817 Larchmont Avenue, Chicago, Illinois
NEW YORK · HOLLYWOOD · LONDON (B. & H. Co., Ltd.) · *Established 1907*

BELL & HOWELL
Filmo
WHAT YOU SEE, YOU GET

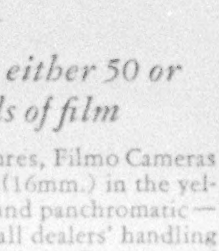
Filmo 70-D



Filmo 70-D, with one Taylor-Hobson Cooke 1-inch F 3.5 lens and smart SESAMEE-locked Mayfair case, costs but $245. Other models with different lens combinations range upward in price.



Filmo 75, pocket size and aristocratic, $120 and up with case.



Filmo 70-A, the original personal movie camera, $180 and up with case.

All Filmos take either 50 or 100 foot rolls of film

For black and white pictures, Filmo Cameras use Eastman Safety Film (16mm.) in the yellow box — both regular and panchromatic — obtainable at practically all dealers' handling cameras and supplies. Filmo Cameras and Filmo Projectors are adaptable, under license from Eastman Kodak Company, for use of Eastman Kodacolor film for home movies in full color. Cost of film covers developing and return postpaid, within the country where processed, ready to show at home or anywhere with Filmo Projector.

7 *Shaves* for a Postage Stamp

This is all it costs you to try this unique new shaving method—we stake everything on this free trial

GENTLEMEN:

The postman is our best salesman. For he brings the test that wins men to our new product. The product actually sells itself daily in the greatest laboratory of the world—America's bathroom.

Each morning hundreds of new users try Palmolive Shaving Cream at our expense. And 86% of them, we find, discard their former methods for it. Thus, our problem is to get men to take our test. To sign and mail the coupon.

If we can win so many millions in so short a time, surely you want to try this remarkable cream yourself. We do not want to sell you sight unseen. First let us prove our case—then you will *want* to buy.

Mail Coupon—learn these 5 points

After rejecting 129 experimental formulas, our laboratories succeeded in embodying—all in one shaving cream—the 5 things men had asked for. 1000 men had been consulted, had given their advice.

1: Multiplies itself in lather 250 times.
2: Softens the beard in one minute.
3: Maintains its creamy fullness for ten minutes on the face.
4: Strong bubbles hold the hairs erect for cutting.
5: Fine after-effects due to palm and olive oil content.

Now, whether your old shaving preparation suits or not, try ours. *You* risk nothing. *We* undertake, in 7 shaves, to win you. It's an open-and-shut proposition, and you are the judge. So won't you mail the coupon?

4723

To add the final touch to shaving luxury, we have created Palmolive After Shaving Talc—especially for men. Doesn't show on the face. Try the sample we are sending free with the tube of Shaving Cream.

PALMOLIVE RADIO HOUR—Broadcast every Wednesday night—9:30-10:30 p. m., E. T.; 8:30-9:30 p. m., C. T.; 7:30-8:30 p. m., mountain time; 6:30-7-30 p. m., Pacific time—over station WEAF and 39 stations associated with The National Broadcasting Company.

PALMOLIVE
35¢
Shaving Cream

7 SHAVES FREE

and a can of Palmolive After Shaving Talc

Simply insert your name and address and mail to PALMOLIVE, Dept. B-3113, P. O. Box 375, Grand Central Post Office, New York City

....

....

....

Please print your name and address

THE
SEASON'S MOST
INTRIGUING

MEDITERRANEAN CRUISE

Frank's Eighth Annual Cruise De Luxe, Cunard R. M. S. Scythia from New York, Jan. 28, 1930

Brilliant culmination of 54 years' travel experience . . . the complete cruise to the historic Sea of Antiquity . . . over a skillfully planned sea-path to ports of pleasure, fashion, romance . . . aboard a superb cruising ship whose elegancies challenge those of the most luxurious club.

67 perfect days providing a long visit in Egypt and the Holy Land . . . and including such unusual ports as Cattaro, Tunis, Taormina, Malta, Ragusa . . . in addition to the usual Mediterranean countries.

Naturally such a cruise has a wide appeal . . . necessitating early bookings. Rates from $950 . . . including elaborate shore excursions, Cunard's finest First Class service and cuisine, a free stopover in Europe and return by any Cunard steamer. Membership strictly limited to 390 . . . half capacity. Further fascinating details on request.

Established 1875

FRANK TOURIST COMPANY

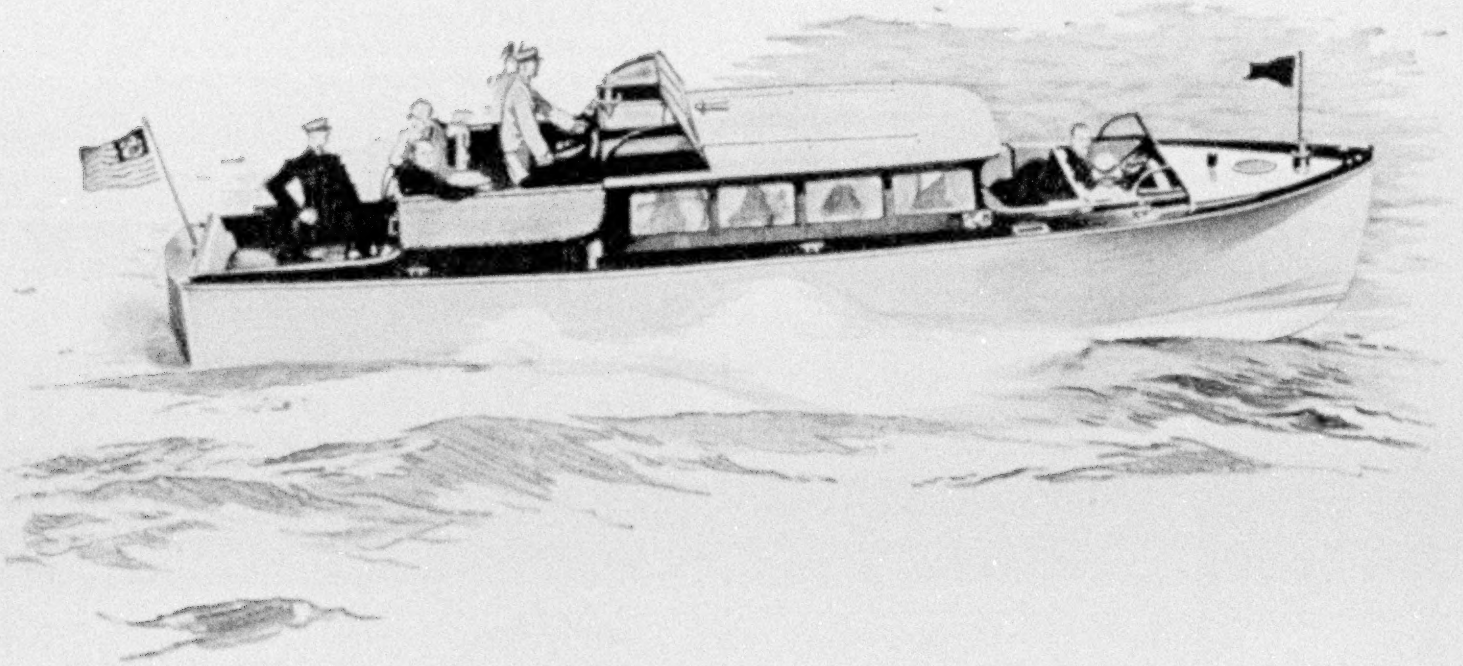
542 FIFTH AVE. at FORTY-FIFTH STREET
NEW YORK CITY

PHILADELPHIA . . . . 1529 Locust Street
CHICAGO . . . . 175 No. Michigan Avenue
SAN FRANCISCO . . . . 29 Geary Street
LOS ANGELES . . . . 408 So. Spring Street

Chris-Craft

the aristocrat

OF THE WATER



Thirty joyous miles an hour in the Chris-Craft 38-foot cruiser—what a way to travel, and what a craft to do it in! Luxurious living, sleeping and eating accommodations that bespeak the skill of master designers—long, low lines in an all-mahogany hull—seaworthiness and safety that yachtsmen demand. Where in all the blue waters could you find a cruiser that would give you this, save this finest of Chris-Craft?

Down where the sailfish leaps in the sapphire Gulf Stream, on Biscayne Bay, or among the Keys, you'll find the Chris-Craft cruiser fleet making boating history this Winter. No other craft so perfect for a Southern cruise—no other so universally welcomed and accepted everywhere as the finest. And you can know the greatest joys of boating at the wheel of *your* Chris-Craft cruiser—this year, every year.

A few of these Chris-Craft wonder ships will be available for Fall and Winter delivery. This is your opportunity to own the cruiser of your dreams. $15,000 F. O. B. factory, completely found. Your Chris-Craft merchant will supply you with literature. Write us for catalog.

CHRIS SMITH & SONS BOAT CO.
770 Detroit Road ◆ Algonac, Michigan
New York Factory Branch: 1 West 52nd St. at 5th Ave.

18 MODELS

Runabouts ◆ Sedans ◆ Commuters ◆ Cruisers ◆ 22 to 38 feet ◆ 30 to 45 Miles an hour
82 to 225 Horsepower ◆ 8 to 26 Passengers ◆ $2235 to $15,000

WORLD'S LARGEST BUILDERS OF ALL-MAHOGANY MOTOR BOATS

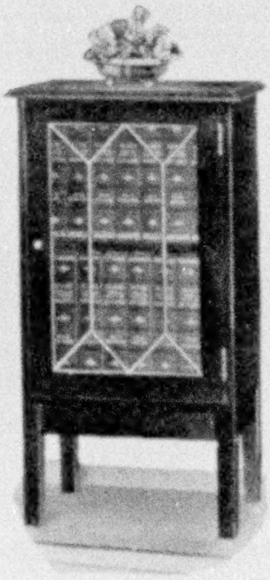
The World Takes to the AIR!

© U.& U.

Transcontinental passenger planes on daily schedule—transatlantic service soon to be open to the public—radio programs from the clouds—new motors, new equipment, new methods daily making aviation a more important part of YOUR life! How can you keep abreast of these amazingly rapid developments, and of progress in all other fields of thought and activity, except with

The Encyclopaedia that NEVER Grows Old

NELSON'S is brought right up-to-date for you *every six months* with new pages which are sent to every subscriber to take the place of out-of-date pages. Only with a LOOSE-LEAF Encyclopaedia is this possible. And this simple and easy replacement of pages gives you *a new edition every six months!*



Size of Case 36" x 30"

NELSON'S PERPETUAL LOOSE-LEAF ENCYCLOPAEDIA

The Most Durable of Bindings

The great AMERICAN Encyclopaedia—equivalent to a library of over 1,000 volumes—and constantly kept up to date by means of its loose-leaf device. Used in the Library of Congress, U. S. Senate, U. S. Supreme Court for its completeness and authority.

FREE-*This Handsome* BOOKCASE

Especially built for Nelson's—richly designed, dust-proof, with leaded-glass single-door. Given to readers of the NATIONAL GEOGRAPHIC, at no additional cost.

Question and Answer Service free to subscribers through the famous Nelson Research Bureau.

Thirty-three Reading Courses of great interest and value for self-education are included to organize your reading.

Illustrated Booklet Free

Free to adults—a beautifully illustrated loose-leaf booklet of sample pages and full information about our free bookcase offer and our *Budget Easy-Payment Plan.*

Mail This Coupon

THOMAS NELSON & SONS, 381 Fourth Ave., N. Y.
[Originators of the Loose-Leaf Reference System]
Publishers for 130 Years

Please mail me your illustrated portfolio of sample pages and full information about the FREE New bookcase, and how by the budget easy payment plan I can own Nelson's Perpetual Loose-Leaf Encyclopaedia, with Free Membership in Nelson's Research Library Service Bureau for Special Information, and Nelson's Reader's Guide Free. Nat. Geog. Oct. 29

Name ....

Address ....

City .... State ....

(Adv. Copyright, 1929, by Thomas Nelson & Sons)

Around the World
INDEPENDENTLY
N.Y.K.
CUNARD

East *and* West
A New Travel Plan

A new world-wide service under the joint auspices of the *Cunard Line* and the *Nippon Yusen Kaisha* . . . *two of the world's outstanding steamship organizations* . . . a new era in the annals of independent travel; endless variations in itineraries. Fare . . . $983 up.

Special literature on request to Your Local Agent or Tourist Department

CUNARD LINE

25 Broadway, New York

or

N. Y. K. LINE

8-10 Bridge Street New York 545 Fifth Avenue

A MINIATURE

On Porcelain
or Ivory . . .
A Priceless Possession
or Ideal Xmas Gift!

2 EXTRAORDINARY SPECIAL OFFERS

A miniature on porcelain, oval or square, beautifully colored, 3¼x4¼ inches, including a gold-plated frame, regular $50.00, for	$17.50
A miniature on ivory, painted by a well-known and reputable miniature painter, regular $250.00, for	$125.00

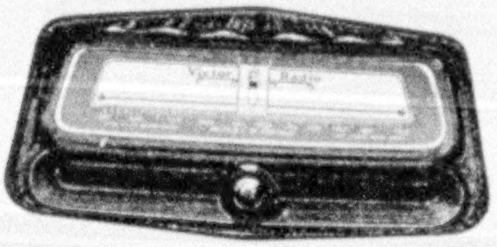
These miniatures can be painted from any suitable photograph, daguerreotype, tintype or snapshot. A moderate charge will be made if original is badly faded or needs restoring. We always quote you the exact cost before proceeding with the work. This is your REAL opportunity to perpetuate in color those who are, or were, dearest and nearest to you. All orders for Xmas delivery must be in our Studios by November 25.

Please write to Dept. C for a FREE copy of our illustrated booklet, showing miniatures, frames and cases in actual sizes.

AIMÉ DUPONT GALLERY

Portraits in oil painted on canvas. Old photographs copied and restored. Send for Booklet.

509 FIFTH AVE., near 42nd St., N. Y. City
Established 1884


Victor Super-Automatic Station Selector: *All stations permanently visible...slide the knob to right or left —you have the station you want!*

VICTOR
MICRO-SYNCHRONOUS
RADIO *Revolutionizes Musical Reproduction*

AT LAST A RADIO THAT IS REALLY A MUSICAL INSTRUMENT

For the first time America is hearing a radio that reproduces all the details and subtle variations of tone without distortion. Victor-Radio marks the end of radio's experimental years.

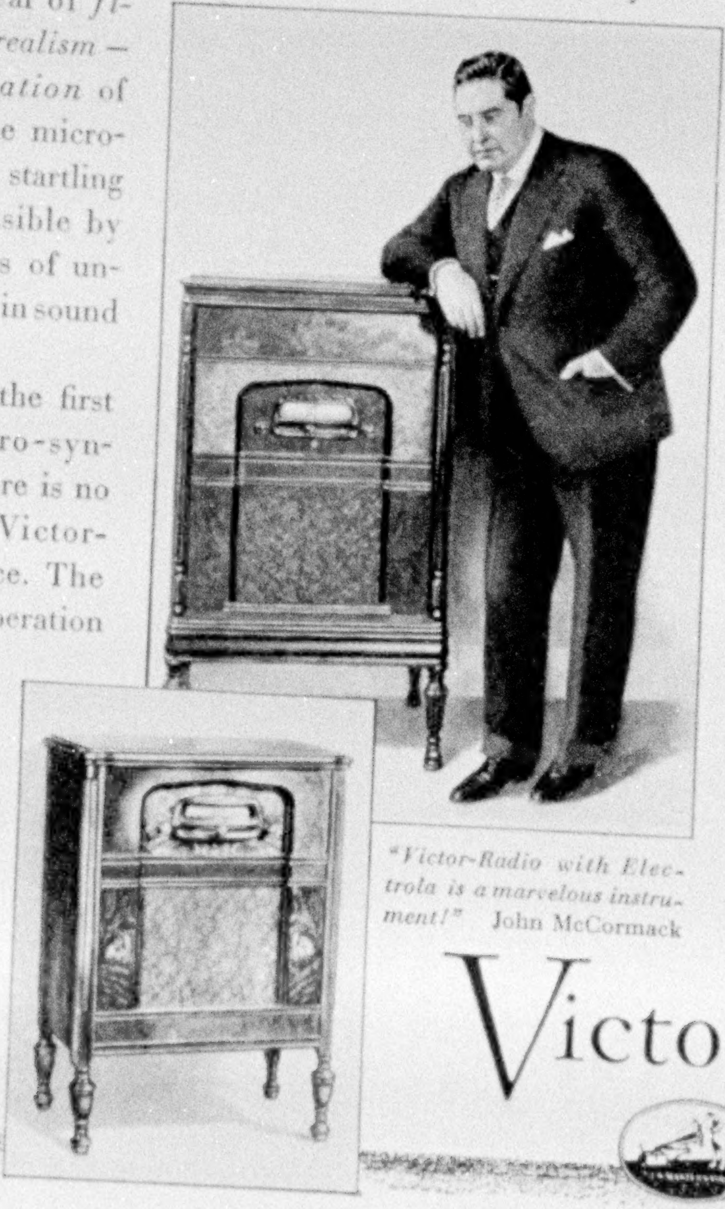
Never before has a radio met the exacting requirements of the world's great artists. Victor brings a new ideal of *fidelity*—thrilling *realism*—complete *duplication* of what goes into the microphone. This is the startling triumph made possible by more than 30 years of undisputed leadership in sound reproduction.

Victor-Radio is the first and the only micro-synchronous radio. There is no guesswork about Victor-Radio performance. The Victor method of operation is years in advance. Tuning is instant—and micro-exact.

If you love music, whether you have a radio or not hear the new Victor instruments. You can have Victor-Radio either separately or with the amazing new Victor Electrola...bringing you broadcast music that is changing the whole nation's standard of radio entertainment...music from records you will have to experience to believe possible—of brilliance and depth beyond your power to imagine! Play at will at any volume—from whisper to full orchestra: on these instruments high notes and low are sounded in their just proportion. Victor tone quality does not vary.

You have never seen such distinctive, exquisite and compact Victor-built cabinets. Inside and out, to the most minute detail, world-famous Victor craftsmanship is your guarantee of quality and dependability.

And here is news important to many. Unparalleled Victor resources have achieved amazingly low list prices. Only $155* for the exquisite Victor-Radio Console...$275* for the Victor-Radio Electrola. Victor Talking Machine Division—Radio-Victor Corporation of America, Camden, N.J., U.S.A.

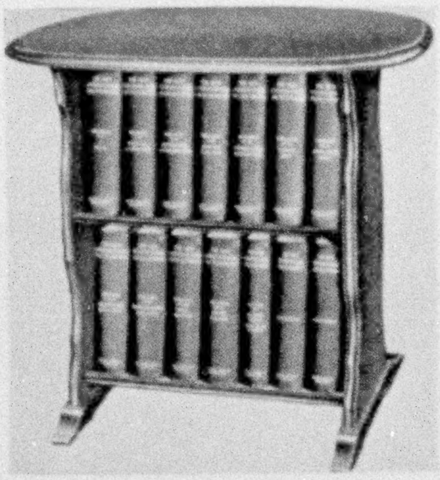

"Victor-Radio with Electrola is a marvelous instrument!" John McCormack

Victor-Radio Console R-32. Exclusive new modernized circuit; unique sensitivity and selectivity. List price $155. Victor-Radio-Electrola, RE-45 (above). List price $275.* Less Radiotrons.*

Victor-Radio
with Electrola

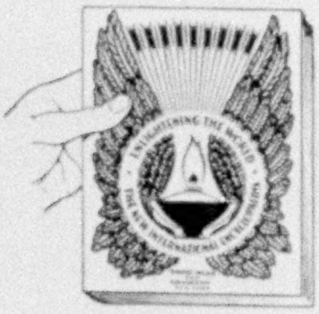
SAVE $51.00

and get this beautiful $30.00 Danersk Book-table FREE!



This beautiful Period Book-table in solid maple, antique walnut tone, Free!

Now you can get the great New International Encyclopædia called by world-famous authorities "Our Greatest Encyclopædia" in the 14-volume Popular Edition at a remarkable saving of $51. It is bound in luxurious Blue Classic Vellum. The *brand-new*, 2000-page supplement just from the press gives new facts, new figures, new illustrations, fascinating new information about our modern complex civilization, making the New International the most up-to-date and modern encyclopædia in the world. With your order we send you a $30 Early-American Period Book-table *free!* Send the coupon below immediately to Dodd, Mead & Company and receive without any obligation on your part a beautiful, illustrated informative book, "Enlightening the World," and 10-day Examination Offer and Easy Payment Plan!



CLIP AND MAIL COUPON NOW!

Mail *now* to DODD, MEAD & COMPANY NG-10-29
449 Fourth Avenue, New York

Gentlemen: I would be interested in reading your free, illustrated 56-page book, "Enlightening the World." Send it to me immediately, with no obligation on my part, with details of your Easy Payment Plan, 10-day Examination Offer.

Name ____________________

Address ____________________

How High a Yield Ought You to Expect?

NEVER was safety, as a cardinal principle of investing, a more important consideration than it is at present. Bankers in practically every community are urging their clients and depositors to think of safety before everything else. The yield a security offers—the steady income it produces—should be as high, but *only* as high, as is consistent with thorough safety of principal. The man or woman with money to invest can do nothing wiser than to consult a banker, or a high-grade investment banker, before buying. S. W. STRAUS & CO. have prepared an interesting easy-to-understand booklet "How to Invest Money". Every person seriously concerned in safeguarding his future should own a copy of this booklet. It will be sent you without charge.

Ask for Booklet J-1008

S.W. STRAUS & CO.
Investment Securities Incorporated

STRAUS BUILDING
565 *Fifth Avenue*
at 46th St.
NEW YORK

STRAUS BUILDING
Michigan Ave.
at Jackson Blvd.
CHICAGO

STRAUS BUILDING
79 *Post Street*, SAN FRANCISCO

—ESTABLISHED IN 1882—

7 yards for a touchdown!

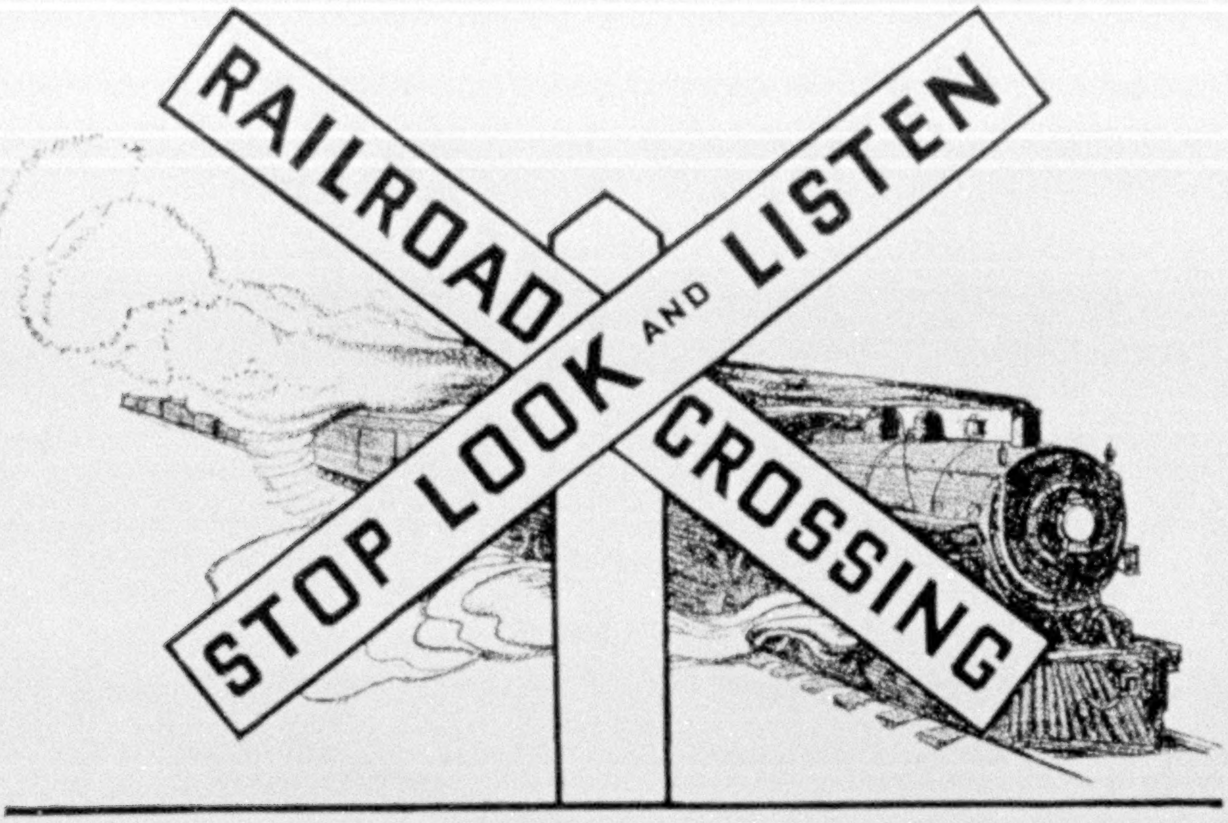
Only 7 yards to go! Will they make it? Get a *Zeiss close-up* of every thrilling play.

A Zeiss Binocular, because of its larger field of view, enables you to follow the players without constantly shifting your glass. Ask your dealer to show you one, or write for Catalogue T-380.

CARL ZEISS JENA

Carl Zeiss, Inc., 485 Fifth Ave., New York
728 South Hill Street, Los Angeles

CARL ZEISS
BINOCULARS



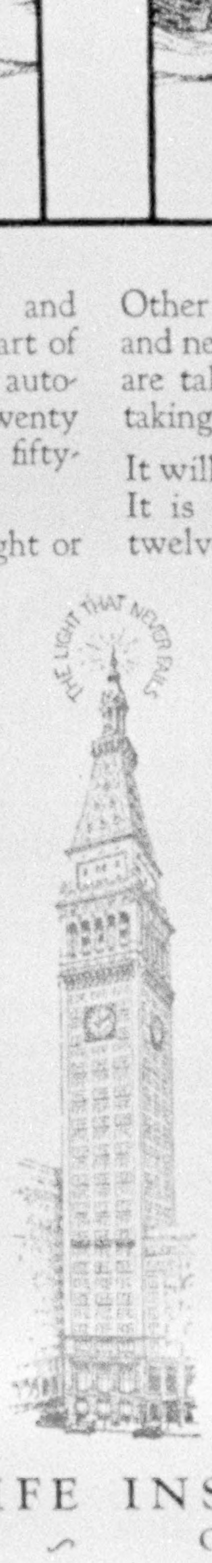
© 1929 M. L. I. Co.

THE warning signs, "Stop, Look and Listen," have become merely a part of the roadside landscape to many an automobile driver. Heedlessly he passes ten, twenty—perhaps fifty of them—safely. At the fifty-first comes the crash.

Last year 8,383 persons were killed outright or injured in automobile accidents at grade crossings in the United States. There are about 235,000 grade crossings in the country; more than 93% of them are unprotected.

With millions of new automobiles on the roads each year, accidents at grade crossings are increasing at an alarming rate, for the reason that most of the States have no organized program for protecting motor traffic which must cross railroad tracks.

New York, under wise leadership, has shown how to solve the problem. Before the Empire State adopted her present plan, but 10 crossings a year, on an average, were done away with. This year, the first in which the railroads, the State and communities have co-operated—the railroads paying 50% of the cost, the State 49% and communities 1%—85 death traps are marked for immediate removal. Next year New York hopes to eliminate 150 of its worst danger spots.


THE LIGHT THAT NEVER FAILS

Other States are becoming aroused to this terrible and needless destruction of life and property and are taking steps to prevent it. Canada, too, is taking action.

It will require many years to complete the work. It is estimated that it will ultimately cost twelve billions of dollars. But what railroads and States and communities ought to do is to begin at once with those grade crossings which should be abolished first.

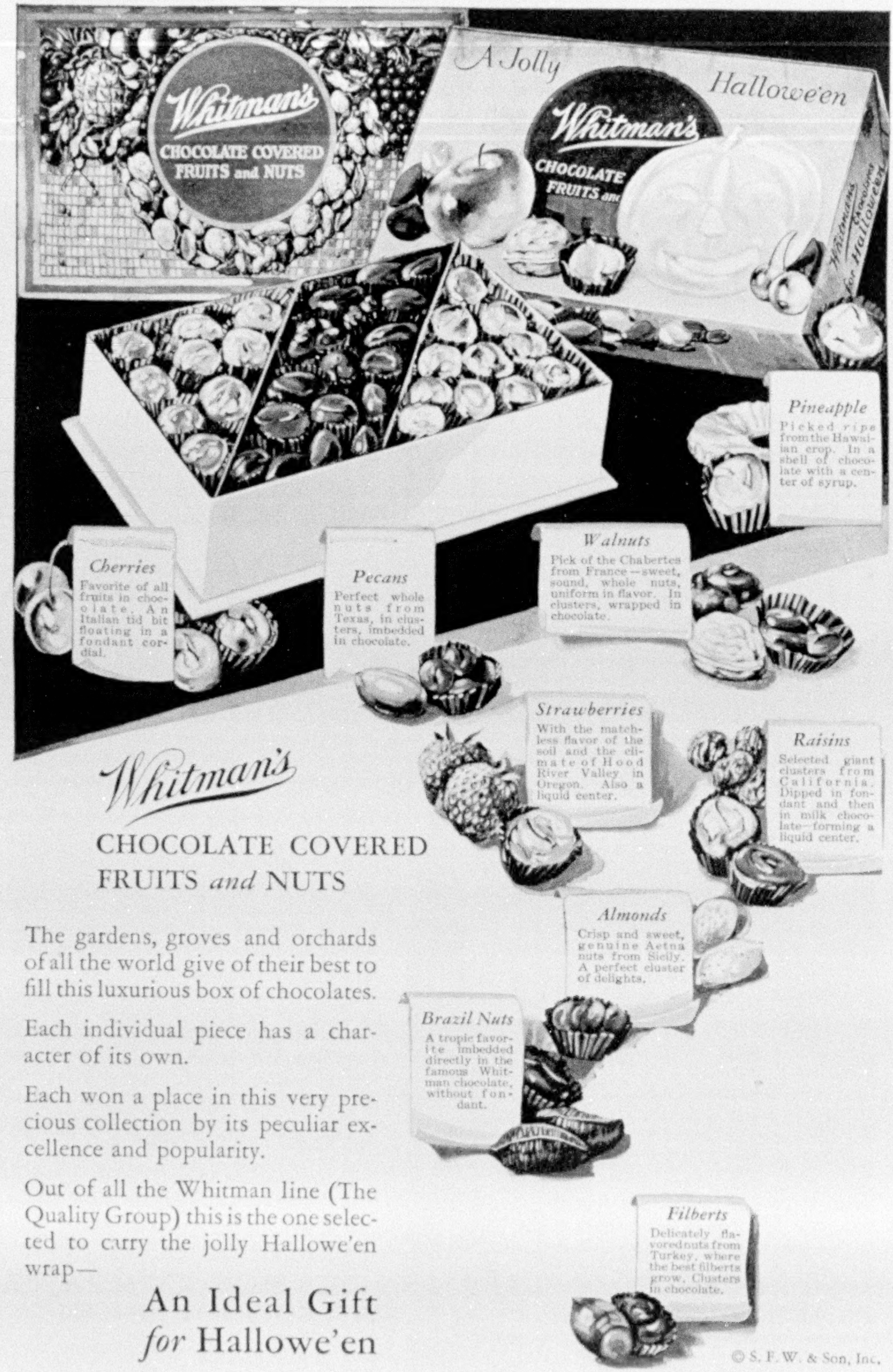
Grade crossings are dangerous not only to automobilists and pedestrians, but to people who are traveling on trains. The first section of a limited train struck an automobile and killed two persons. The train stopped and the second section plunged into it, killing thirty-two passengers in the first section.

Wherever the law provides facilities for eliminating grade crossings, citizens should see that public officials perform their duty and abolish these death traps. Wherever the laws must be amended, people should meet the issue squarely and urge prompt action by legislative bodies.

There is danger at every grade crossing. Get rid of them. Copy of New York's progressive program will be mailed free on request. Address, Department 109-N.

METROPOLITAN LIFE INSURANCE COMPANY

FREDERICK H. ECKER, PRESIDENT — ONE MADISON AVE., NEW YORK, N. Y.



Pineapple
Picked ripe from the Hawaiian crop. In a shell of chocolate with a center of syrup.

Cherries
Favorite of all fruits in chocolate. An Italian tid bit floating in a fondant cordial.

Pecans
Perfect whole nuts from Texas, in clusters, imbedded in chocolate.

Walnuts
Pick of the Chabertes from France—sweet, sound, whole nuts, uniform in flavor. In clusters, wrapped in chocolate.

Strawberries
With the matchless flavor of the soil and the climate of Hood River Valley in Oregon. Also a liquid center.

Raisins
Selected giant clusters from California. Dipped in fondant and then in milk chocolate—forming a liquid center.

Almonds
Crisp and sweet, genuine Aetna nuts from Sicily. A perfect cluster of delights.

Brazil Nuts
A tropic favorite imbedded directly in the famous Whitman chocolate, without fondant.

Filberts
Delicately flavored nuts from Turkey, where the best filberts grow. Clusters in chocolate.

Whitman's

CHOCOLATE COVERED FRUITS *and* NUTS

The gardens, groves and orchards of all the world give of their best to fill this luxurious box of chocolates.

Each individual piece has a character of its own.

Each won a place in this very precious collection by its peculiar excellence and popularity.

Out of all the Whitman line (The Quality Group) this is the one selected to carry the jolly Hallowe'en wrap—

An Ideal Gift
for Hallowe'en

© S. F. W. & Son, Inc.

VOL. LVI, No. 4 WASHINGTON OCTOBER, 1929

THE NATIONAL GEOGRAPHIC MAGAZINE

COPYRIGHT, 1929, BY NATIONAL GEOGRAPHIC SOCIETY, WASHINGTON, D. C. IN THE UNITED STATES AND GREAT BRITAIN

MANCHURIA, PROMISED LAND OF ASIA

Invaded by Railways and Millions of Settlers, This Vast Region Now Recalls Early Boom Days in the American West

BY FREDERICK SIMPICH

AUTHOR OF "THE GEOGRAPHY OF OUR FOREIGN TRADE," "ALONG THE NILE, THROUGH EGYPT AND THE SUDAN," "SINGAPORE, THE CROSSROADS OF THE EAST," "THE SANTA FE TRAIL, PATH TO EMPIRE," ETC., ETC., IN THE NATIONAL GEOGRAPHIC MAGAZINE

IN MANCHURIA, as in Egypt and Mexico, drama never dies.

From hereabouts, before Columbus was born, rode a Mongol horde to conquer Asia and harass Europe.

From here, scaling the Great Wall which timid Chinese had raised against them, came giant Manchus to oust the Mings and found a new dynasty at Peking.

Crossing the sea in clumsy junks 1,200 years ago, the same bold Manchus took tiger and leopard skins, ermine, and wild ginseng to trade with Japan for silks and brocades. Later, when the near-world empire of Kublai Khan rolled from the Yalu to the Danube, a Mongol fleet of a thousand ships sailed against the shoguns, only to be smashed by "God's Wind" on the coast of Kyushu.

Here, through turbulent years, three ancient empires met—the Bear, the Dragon, and the Rising Sun. Their struggles shook the earth. Korea succumbed, absorbed by the Rising Sun; the Dragon mothered Manchuria. War mangled the Bear, and to the north rose an evanescent Far Eastern Republic.

Only stupendous forces, far-reaching social changes in men's thought, life, and work, can thus twist a map and move its frontiers. It was so here. As border lines bent and broke, railways ran through; new towns were spawned in new-made streams of trade and new people came — tidal, sweeping seas of people, a mighty migration, far greater than when Israel quit Egypt, a migration perhaps without parallel in recorded history. Small wonder that the world watches this far nook of Asia to see what may happen next!

RAILROADS AND IMMIGRANTS REVOLUTIONIZE MANCHURIA

Yet in all its repertoire of high adventure—political, martial, and economic—two events loom largest in the stirring story of Manchuria. They sway not only the destiny of ancient Manchuria itself, but they affect the fortunes and the future of Japan, China, and Russia. These events are the coming of the Russian-built railways and the immigration of millions of Chinese farmers. In the last three decades these forces, railways and immigrants, have jumped Manchuria ahead by 1,000 years—moved her from a region of feudal lords, bandits, and nomad herdsmen to a land of huge trade and agriculture, in many aspects strangely like parts of the American West.

Photograph by Maynard Owen Williams

RUSSIAN LADS WHO ARE GROWING UP WITH HARBIN

This boom city of Manchuria is only 31 years old. When the Russians came to build the railroad, only one house stood where now rises this gay, colorful, pulsating Moscow of the Far East (see text, page 399). It is still Russian in appearance and is the only city in Asia which has nearly as many whites as natives. The Chinese control its administration.

So swiftly these changes have come that very often old and new still clash in oddly visual violence. Thus now, across South Manchuria, you may ride a crack train, smooth, shiny, and fast as any Broadway Limited or Frisco Flyer—a solid train it is, of American Pullmans, drawn by a big Baldwin locomotive made in Philadelphia—yet from its observation car you may see peasants pushing wheelbarrows with sails on them—a type of vehicle old in China when Confucius was a baby.

Steam shovels made in Milwaukee are moving mountains; Yankee tractors, jerking a fleet of plows, scurry across the virgin plains, past walled hamlets where yellow men scratch garden patches with wooden hoes, as in Bible times. A long walk, for farmers, from the days of Abraham to Henry Ford.

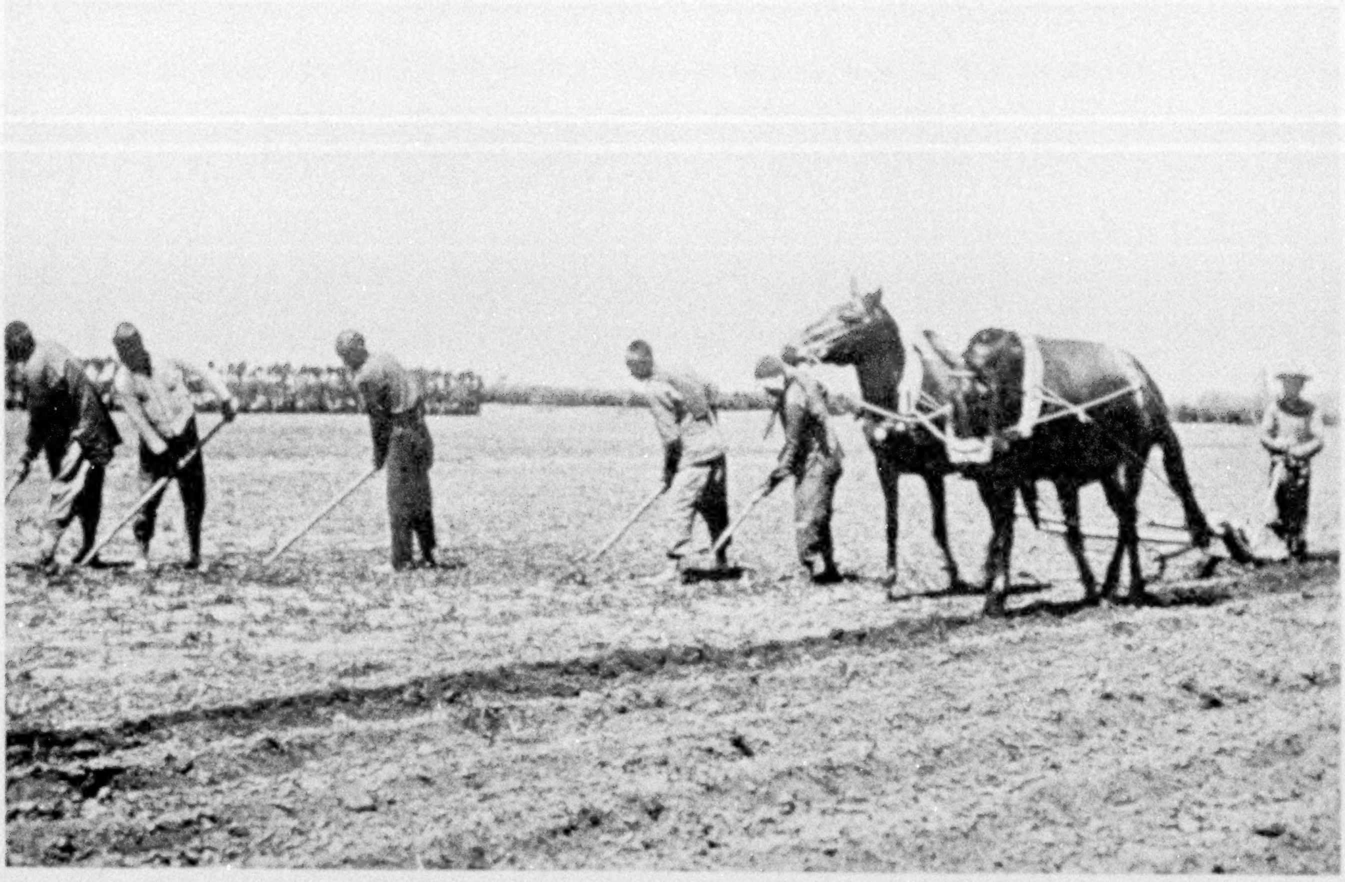
STORMY AND EVENTFUL IS THE STORY OF THIS NOOK OF ASIA

Fascinating, indeed, is the long, colorful story of Manchuria's youth and middle years, and the dramatic rise of the Manchu dynasty, when a handful of Bannermen took Peking and ruled all China from 1644 till 1912.

But to see why, to-day, Manchuria is the most prosperous and rapidly developing region of all Asia, one need look back only as far as 1894. That year, when Japan invaded Manchuria and defeated China in a dispute over Korea, marked the dawn of a new era. At the end of the war China, by the peace of Shimonoseki (April, 1895), ceded to Japan in perpetuity all land south of a line drawn from the mouth of the Yalu to Newchwang, an open treaty port on the Liao River.

Russia, France, and Germany intervened, however, and induced Japan to give up this concession, lest it jeopardize the peace of the Far East. Japan complied.

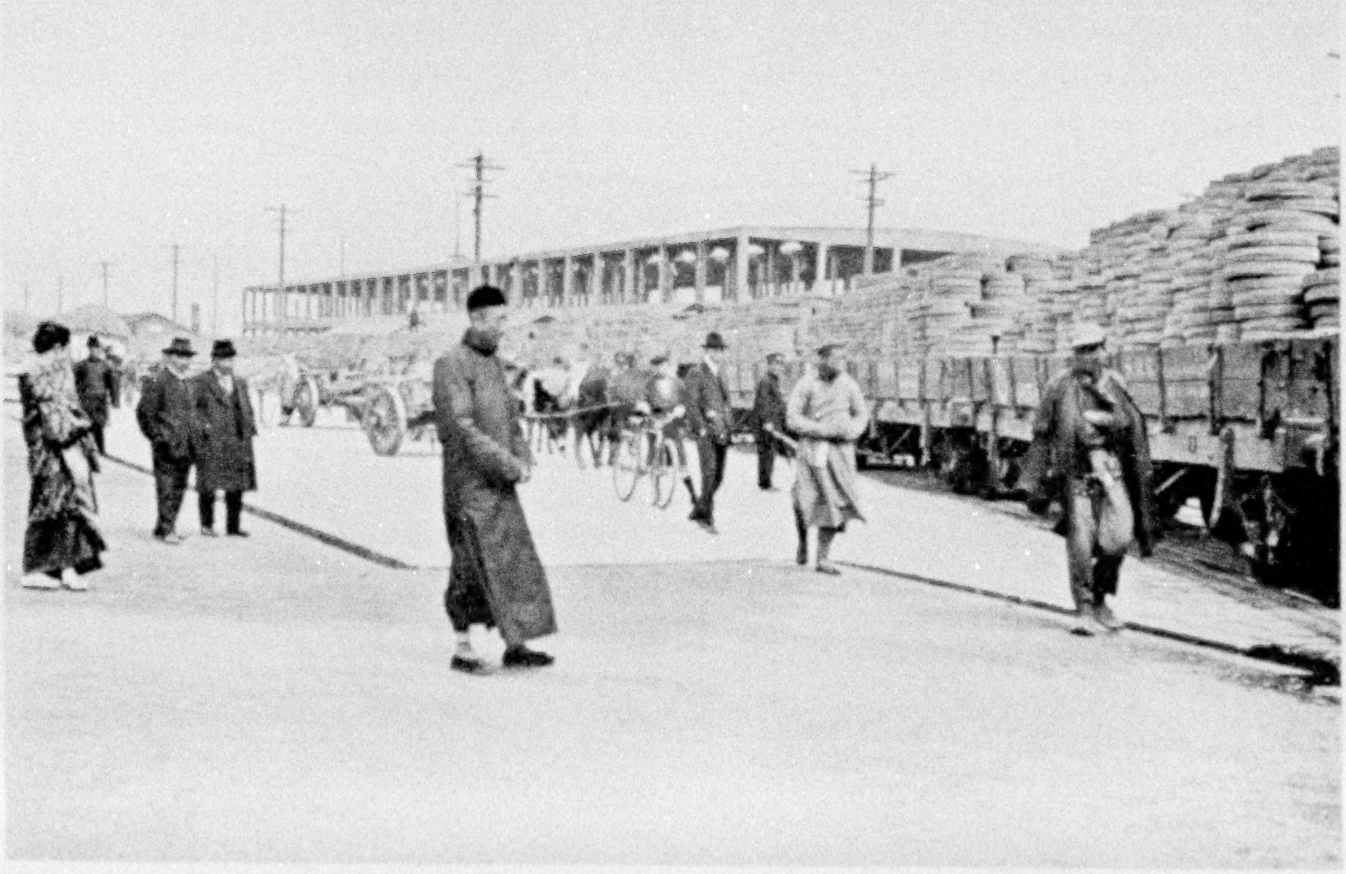
As early as 1639 Russia, of course, had found her way to the Amur. By 1860 she had acquired the vast Maritime Province, a veritable empire, stretching from the



Photograph courtesy South Manchuria Railway

THE CHINESE FARMER HOES HIS OWN ROW IN MANCHURIA

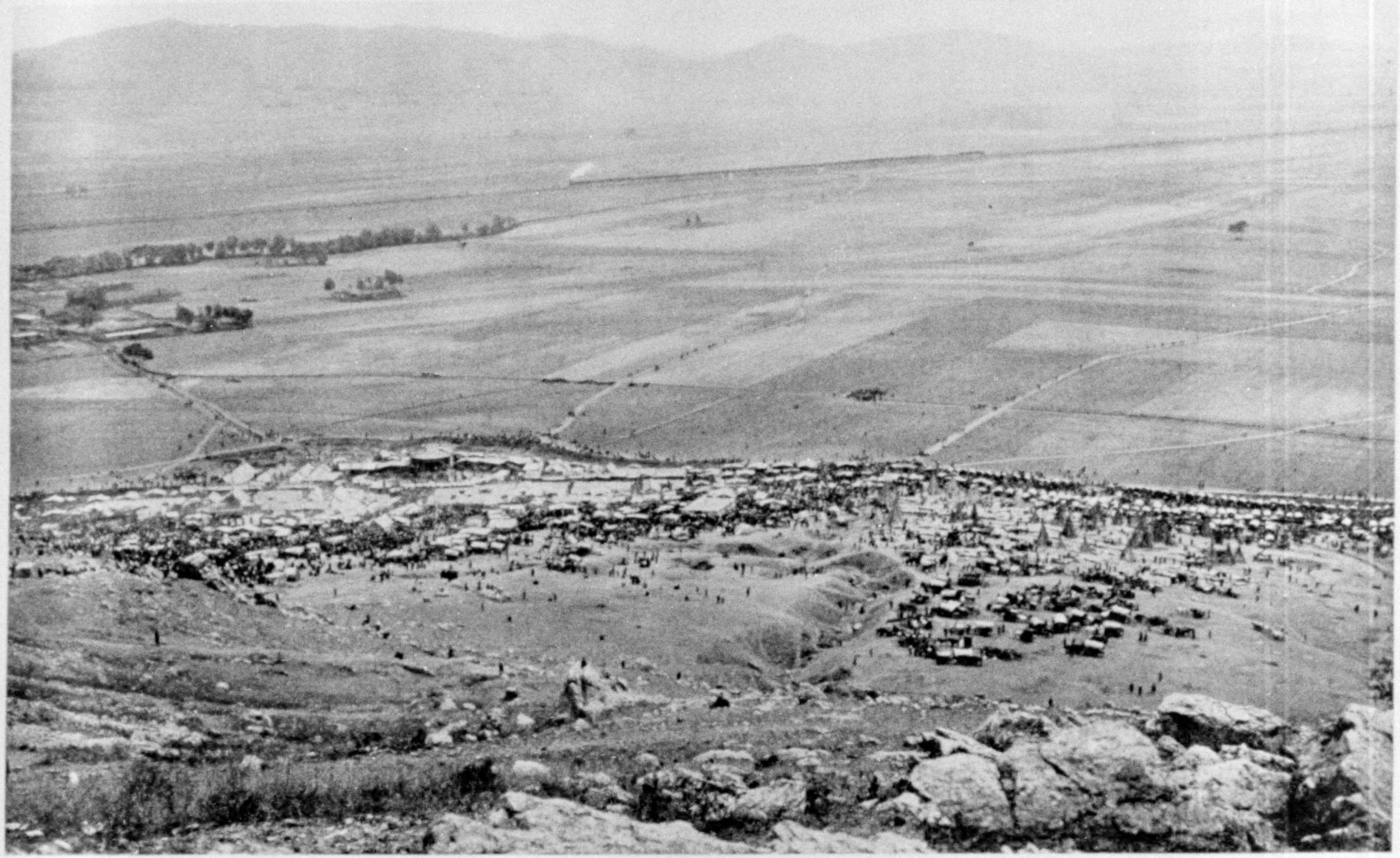
Millet, wheat, and beans are the great crops of northern Manchuria. The sorghumlike *kaoliang* grows better to the south, and from it a strong liquor is distilled. Such distilleries and the bean-oil mills are among the chief industries. Near Kungchuling the South Manchuria Railway runs through this level rich region, which resembles Iowa.



Photograph by Alice Schalek

A NEWCOMER IN THE WORLD'S COMMERCE

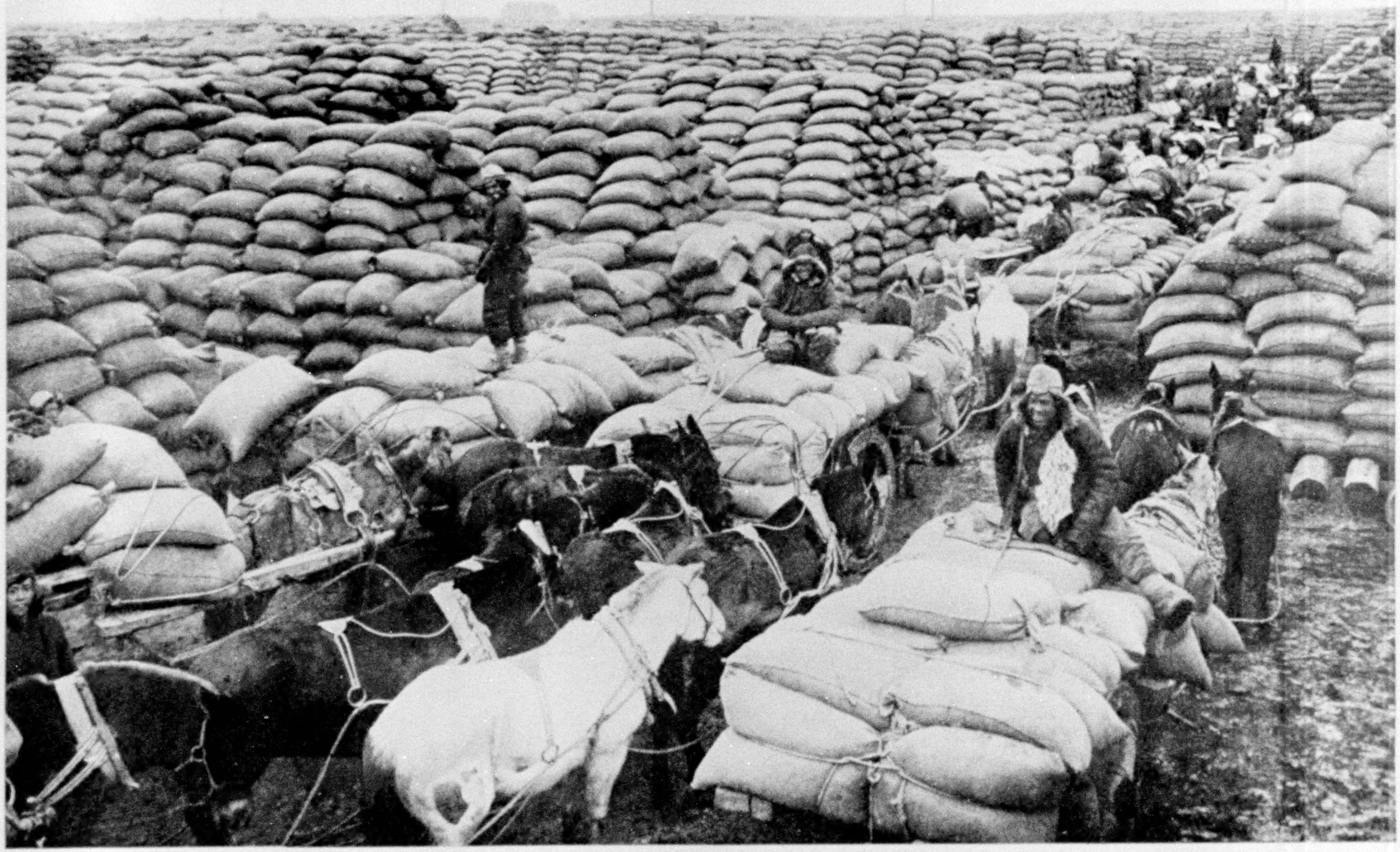
As food for man and beast, as fertilizer, and as raw material for industry, the soy bean, in its rapid rise to international importance within the last 20 years, has made an agricultural epic. A trainload of soy-bean cakes at Dairen.



Photograph courtesy South Manchuria Railway

NOW PEACEFUL PILGRIMS HALT THEIR CARTS WHERE KUROPATKIN CAMPED

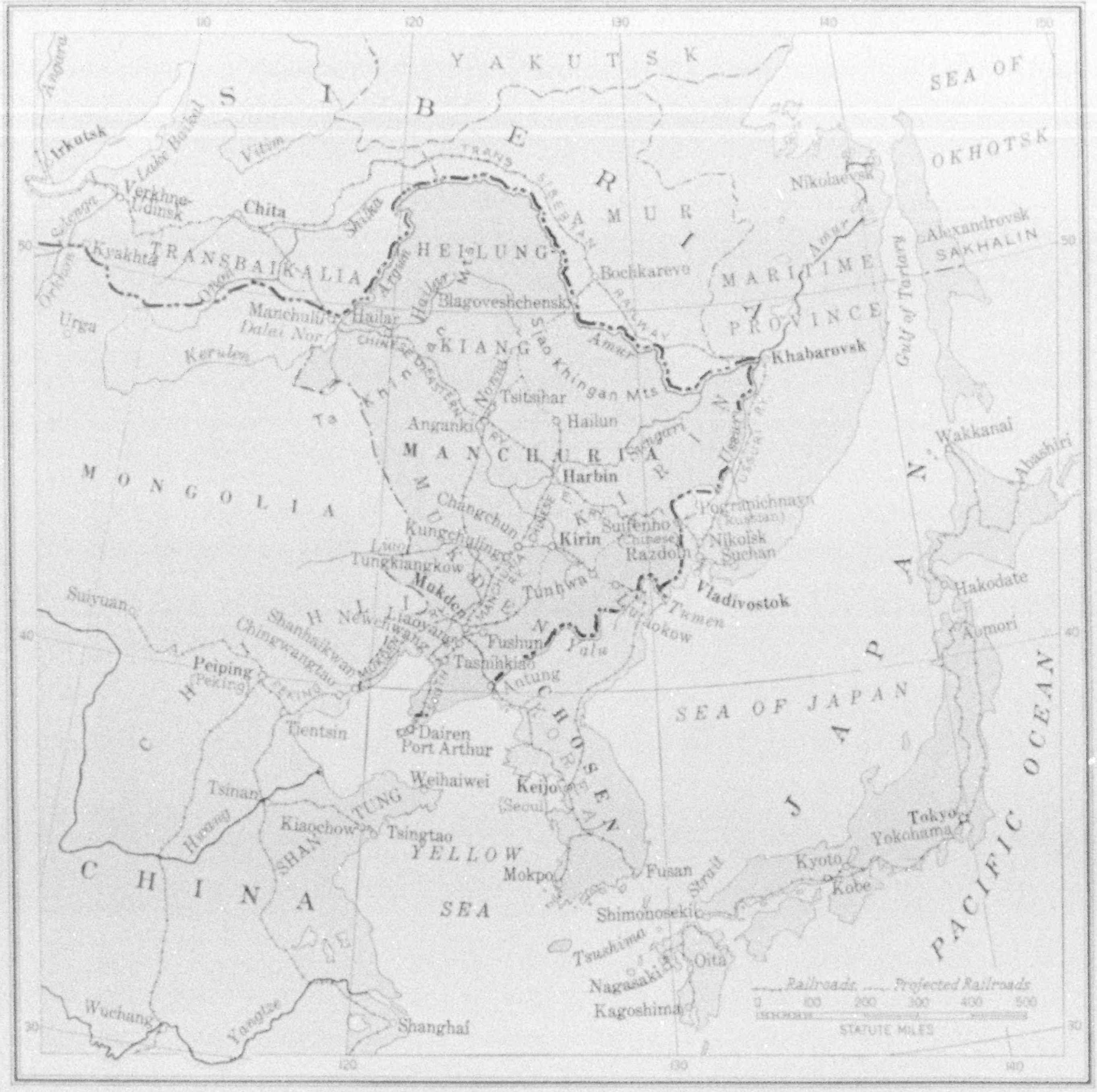
In April of each year (by the Chinese calendar) thousands of visitors flock to the Shrine of the Sisters at Tashihkiao, on the Liaotung Peninsula, historic battleground of the Russo-Japanese War. The fair, held at this time, is more of a drawing card, however, than the ancient shrine.



Photograph from Ewing Galloway

BY SOY BEANS ALONE MANCHURIA COULD LIVE AND SUPPLY THE WORLD

For 5,000 years the Chinese have eaten this important crop, but Europe and America did not wake up to its value until recent times. Now Manchuria produces nearly three-fourths of China's entire output, and the growth of the industry there has attracted thousands of Chinese, chiefly from Chihli and Shantung. Bags of beans in a shipping yard near Dairen.


110
120
130
140
150
40
50
30
YAKUTSK
SIBERIA
SEA OF OKHOTSK
Angara
Irkutsk
Lake Baikal
Vitim
Verkhne-Udinsk
Selenga
Chita
Shilka
TRANS-SIBERIAN RAILWAY
AMUR
Nikolaevsk
Amur
Alexandrovsk
SAKHALIN
Orkhon
Kyakhta
TRANSBAIKALIA
Onon
Argun
HEILUNGKIANG
Bochkarevo
MARITIME PROVINCE
Gulf of Tartary
Urga
Manchuli
Hailar
Dalai Nor
Kerulen
CHINESE EASTERN RY.
Blagoveshchensk
Amur
Little Khingan Mts.
Khingan Mts.
Nonni
Tsitsihar
Hailun
Khabarovsk
Ussuri
USSURI RY.
Anganki
MANCHURIA
Harbin
Sungari
Wakkanai
Abashiri
MONGOLIA
KIRIN
Changchun
Kirin
Kungchuling
Pogranichnaya (Russian)
Suifenho (Chinese)
Nikolsk
Suchan
Razdolnoe
Liao
Tungkiangkow
Mukden
Tunhwa
Vladivostok
Tumen
Hakodate
Aomori
Suiyuan
Shanhaikwan
Chingwangtao
Newchwang
Liaoyang
Fushun
Tashihkiao
Yalu
Antung
Peiping (Peking)
Tientsin
Dairen
Port Arthur
Weihaiwei
Keijo (Seoul)
CHOSEN
KOREA
SEA OF JAPAN
JAPAN
PACIFIC OCEAN
Tsinan
Hwang
Kiaochow
Tsingtao
SHANTUNG
YELLOW SEA
Mokpo
Fusan
Shimonoseki
Strait
Tokyo
Yokohama
Kyoto
Kobe
CHINA
Tsushima
Nagasaki
Oita
Kagoshima
Wuchang
Yangtze
Shanghai
Railroads
Projected Railroads
0 100 200 300 400 500
STATUTE MILES

Drawn by C. E. Riddiford

MANCHURIA IS LARGER THAN FRANCE AND THE BRITISH ISLES COMBINED

Two large mountain ranges, with fertile valleys between them, traverse the Land of the Manchus from north to south. The northern section of the "Three Eastern Provinces" (Heilungkiang, Kirin, and Mukden), as the Chinese call the country, is better wooded, but the southern is more fertile and contains twice as many people. Manchuria lies practically within the same degrees of latitude as parts of Spain, England, and Germany, but its winters are long and severe, its summers short and hot, with terrific winds, the "Yellow Dust" of the Chinese, sweeping in from the Mongolian plain in spring.

Ussuri River to the Sea of Japan and comprising an area as big as Mexico. Across this domain, in the 1890's, she was pushing her great Trans-Siberian Railway to strike the sea at Vladivostok. But, as the map shows (see above), the original Siberian road, to reach Vladivostok over Russian territory, had to run a roundabout course along the Amur Valley and via Khabarovsk.

Six hundred miles would be saved if the Russians could build directly from Chita, on the Siberian road, straight southeast across Manchuria to rejoin the Trans-Siberian system near Pogranichnaya, on the way to Vladivostok.

On the heels, then, of her friendly gesture in 1895, when Russia aided China to regain the area lost to Japan at Shimonoseki, the Bear asked the Dragon for the right to build a railway across Manchuria; and, by agreement signed September 8, 1896, that concession was granted. From it dates the rise of modern Manchuria.

Pacific and Atlantic Photograph

MORE RAILWAY CONSTRUCTION IS UNDER WAY IN MANCHURIA NOW THAN IN ANY OTHER PART OF THE WORLD

Two systems, the South Manchuria and the Chinese Eastern, with the English-financed Peking-Mukden track, form the heavy lines in the railway net; but many new connecting roads are being built. While Chinese own and control the new lines, capital is most often supplied by the Japanese, who also do the construction work. To prevent erosion, tufts of grass have been planted along this embankment.

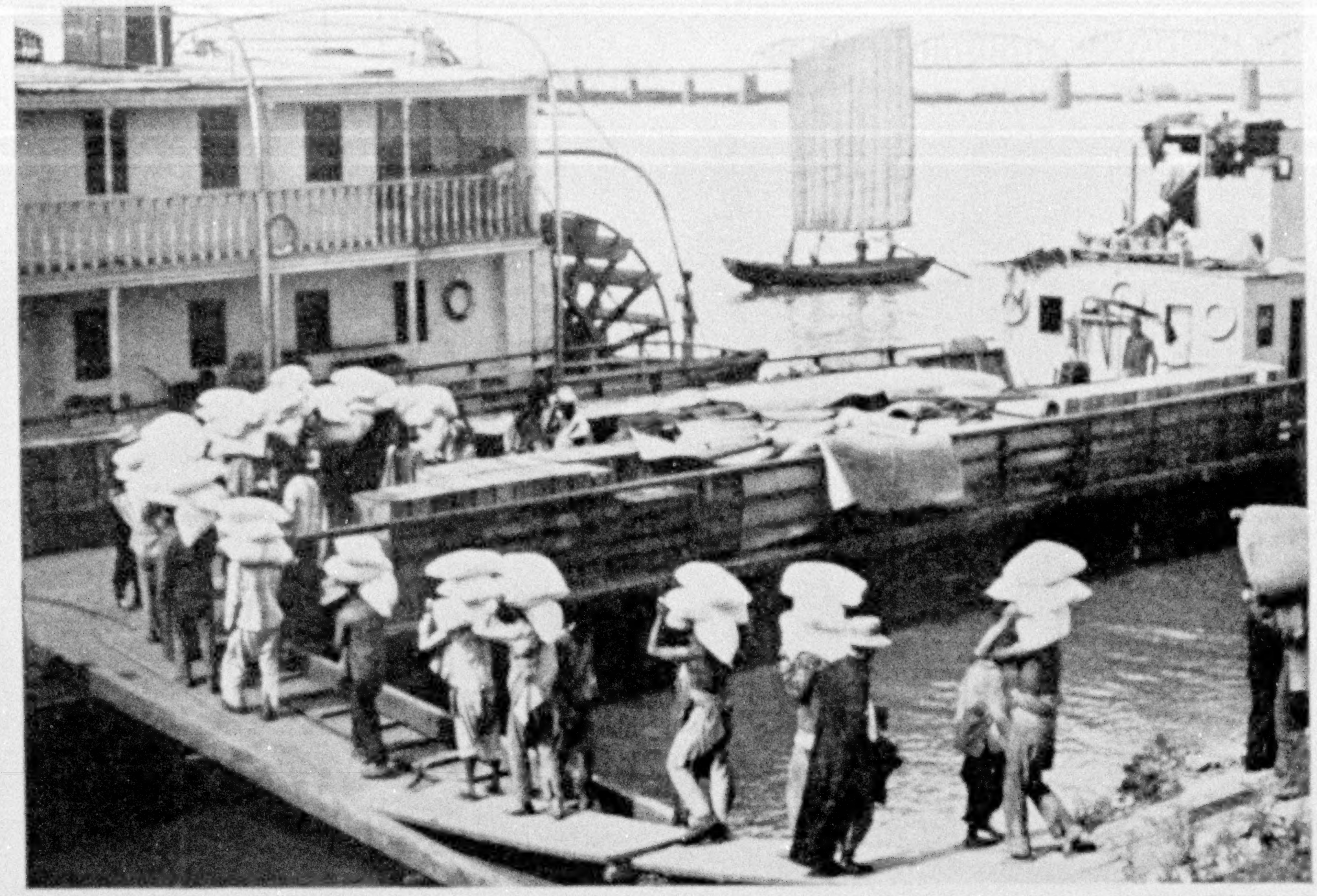
That line and that original branch of it, now called the South Manchuria Railway, with the economic rights they carried, were to do for Manchuria what the Union Pacific did for the American West. Like magic, these new railways were to turn a wild, thinly peopled nomad land into a modern Canaan, a granary of the East, drawing new settlers at the rate of anywhere from 300,000 to 1,500,000 in a single year.

AGAIN AND AGAIN, MANCHURIA MAKES FRONT-PAGE NEWS

Because of its conspicuous importance and its vast influence on migration, industry, and agriculture, it is worth while to review the development of this railway and of its extension, the South Manchuria Railway.

All over the civilized world, newspaper readers know this famous line now as the Chinese Eastern Railway. By the terms of the original agreement, signed between China and the Russo-Chinese Bank (later the Russo-Asiatic Bank), it was to be a joint enterprise. The Tsar's engineers built it and Russians had charge of its shops, maintenance, and technical operations; but Chinese were supposed to share equally with Russian directors in its general management. When completed, in June, 1903, it had cost in excess of $200,000,000. Of this cost, China supplied about $5,000,000 and shared, proportionately, in its profits.

When finished, the main line of the Chinese Eastern ran from its terminus at Manchuli, on the northwest border of Manchuria, to Pogranichnaya, on the eastern boundary. From Harbin, now a busy, important city and then a mere fishing village on the Sungari River, a branch line was dropped south to Dalny, now Dairen, on the Bay of Korea. Most of this section, or that part from Changchun south to Dairen, is now known as the South Manchuria Railway.



Photograph by Maynard Owen Williams

HARBIN IS TO-DAY THE FLOUR-MILLING CENTER OF MANCHURIA

Contrary to popular belief, many millions of Chinese eat no rice, but live on millet, wheat, and other grains. Modern American mill machinery is used here, and the growth of Harbin's flour trade has caused it to be styled the Minneapolis of Manchuria.

Dalny was literally a magic city. Built quickly, by imperial command, it was the talk of the Far East. On this barren, then empty, point of rocks, I saw engineers, architects, and workers of the Tsar spending millions of rubles to build wharves, streets, business blocks, and houses for a population yet to come. A magnificent vision, that—the vision of a great seaport, terminus of a 5,495-mile railway tying Europe to the Orient.

How we laughed, in our youth, at this amazing spectacle — trainloads of tools, food, tents, work animals, scrapers, and building material being dumped on a rocky shore of faraway Asia to build a city where there were no people! Yet to-day Dalny, Dairen, is the second or third most important seaport on all the China coast! In Manchuria something is always happening!

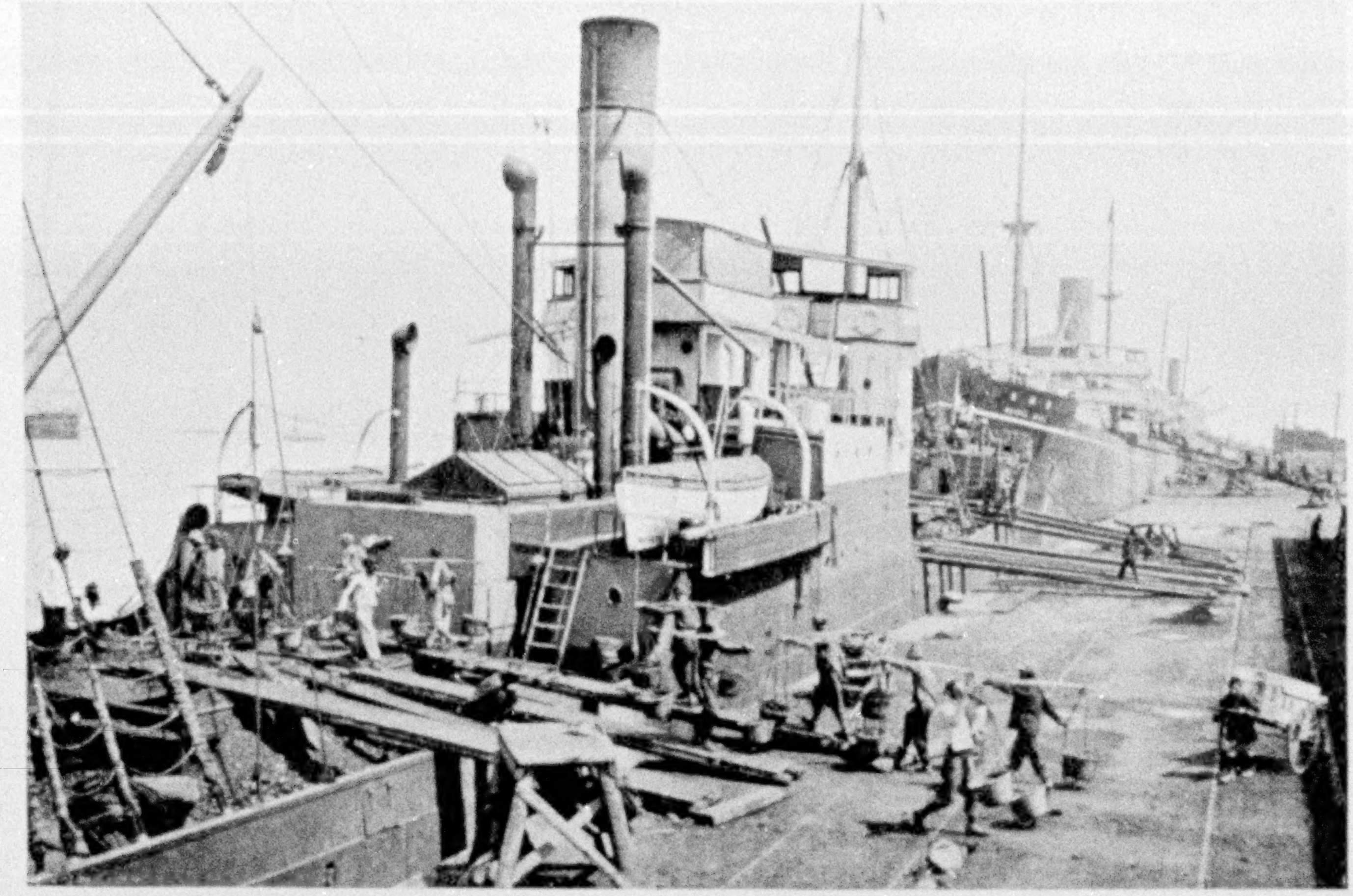
It happened again in 1904, when Japan fought Russia. We saw the holes in the armored sides of escaping Russian battleships — holes big enough to lead cows through, holes made by Togo's guns in Tsushima Strait. Port Arthur, the impregnable, fell; ancient Mukden echoed and shook under the heaviest gunfire Asia had ever known.

Kuropatkin lost—and President Roosevelt mediated. In the peace conference at Portsmouth, New Hampshire, Russia ceded to Japan her lease on the Liaotung Peninsula and possession of the South Manchuria Railway as far north as Changchun. China confirmed this and later extended Japan's lease for a period of 99 years.

THE WORLD WAR BRINGS WHITE SETTLERS FROM RUSSIA

But in Manchuria drama never dies. Tragedy, stark and terrible, stalked across the East when Imperial Russia collapsed. Refugees by the thousands, fleeing the horrors of postwar political chaos in Siberia, came east to beg, borrow, or starve in neutral Manchurian towns. Of them, more later (see text, page 399).

In this chaos the Allies took over the operation of the Chinese Eastern Railway.



Photograph courtesy South Manchuria Railway

IN THREE DECADES THE FISHING VILLAGE OF DAIREN HAS BECOME ONE OF THE WORLD'S BUSIEST PORTS

Miraculously created almost overnight by Russian imperial order, Dalny (now Dairen), first designed as the Pacific open-water terminus of the great Trans-Siberian system, now challenges Shanghai. It is the phenomenal growth of traffic over the South Manchuria Railway, as the new country develops, which makes this the second or third seaport in all China.

From their base at Vladivostok they needed it to move men and supplies. An American engineer, famous for his work on the Panama Canal, was in charge. Later, the newly formed Soviet Government took Imperial Russia's old place as partner with the Chinese. In 1924, by a new treaty, China enjoyed an equal share with the Soviets in the profits of the railway. It was agreed, too, that China should govern the railway zone, inhabited now by many thousands of whites, and that each nation in the compact should refrain from propaganda against the other's social and political systems.

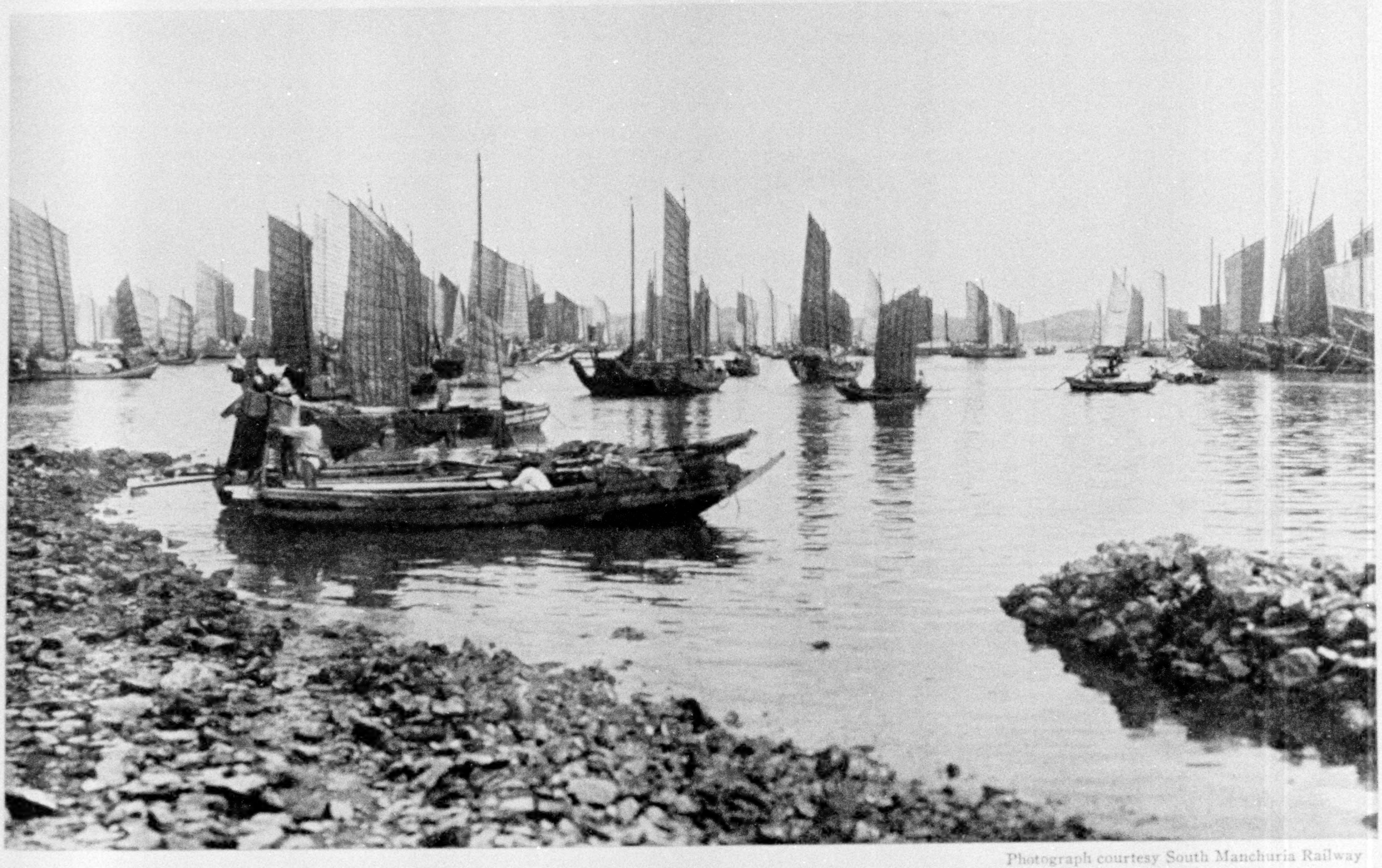
That, stripped of details, is the brief story of the now famous Chinese Eastern Railway up to June 11, 1929, when it was seized by the Chinese, its Russian personnel arrested, causing clouds of war once more to loom over this stage of so many historic struggles.

Immigration, tremendous almost beyond belief, is the other aspect of swift transition in this land of amazing growth.

A million five hundred thousand Chinese, it is estimated, now migrate to Manchuria each year. They come mostly from the bandit-ridden, famine-swept provinces of Chihli and Shantung. When the first railway crept in from Siberia, population in Manchuria was scant; away from the coast and scattered cities, most of the people lived as herdsmen, hunters, and robbers. To-day perhaps 30,000,000 are settled there, plowing virgin soil up to the very frontiers of Siberia, and even encroaching so steadily into Mongolia that no one seems to know just where Manchuria quits and Mongolia begins.

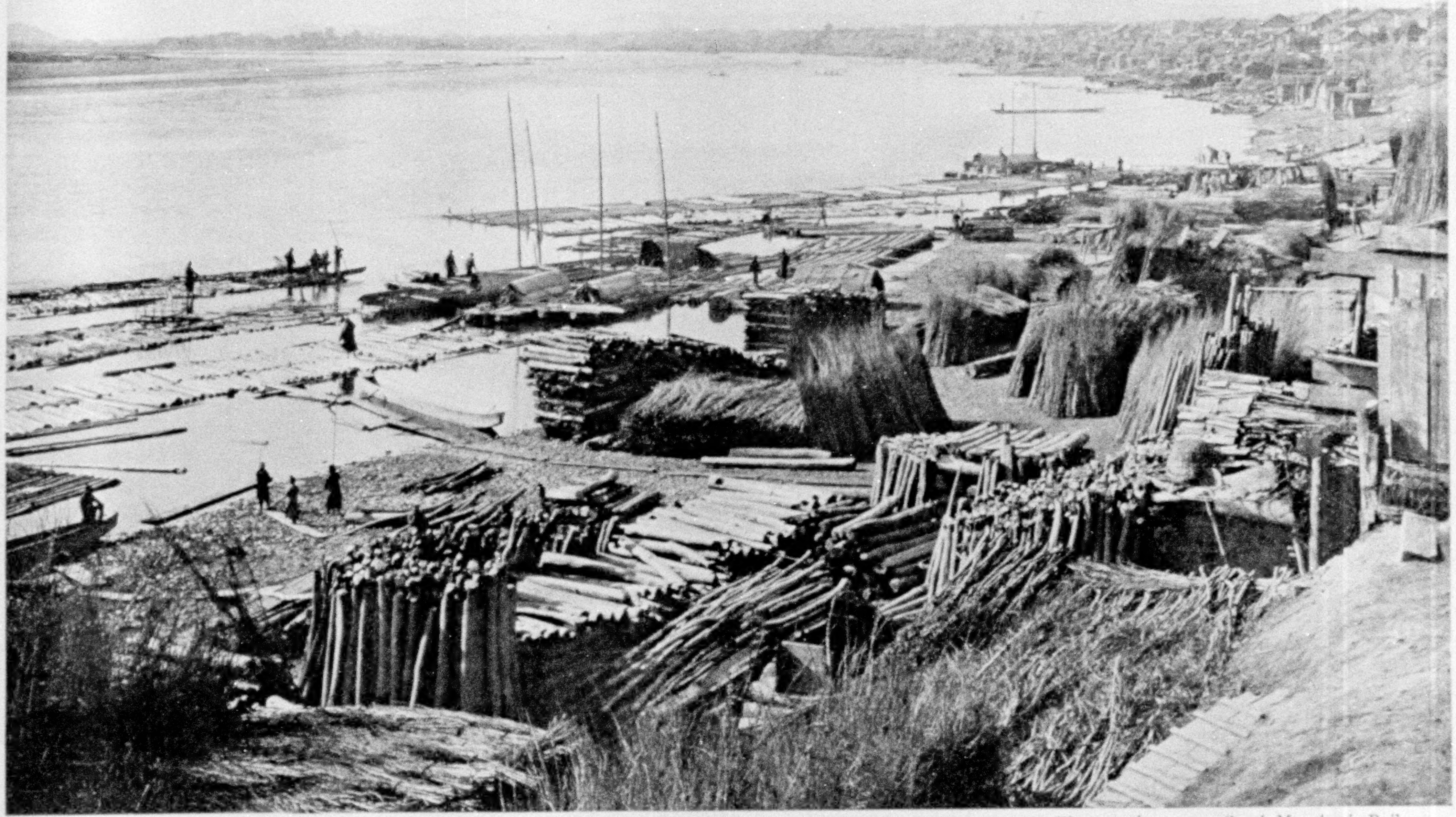
To-day North Manchuria is to China what the Middle West was to America in the decade before the Civil War, with this exception: our older Atlantic Coast States yielded only a share of those who settled our West; many others came from Europe.

Manchuria, a part of North China, lies near the most thickly peopled and hungry country on earth. But for its turbulent



Photograph courtesy South Manchuria Railway

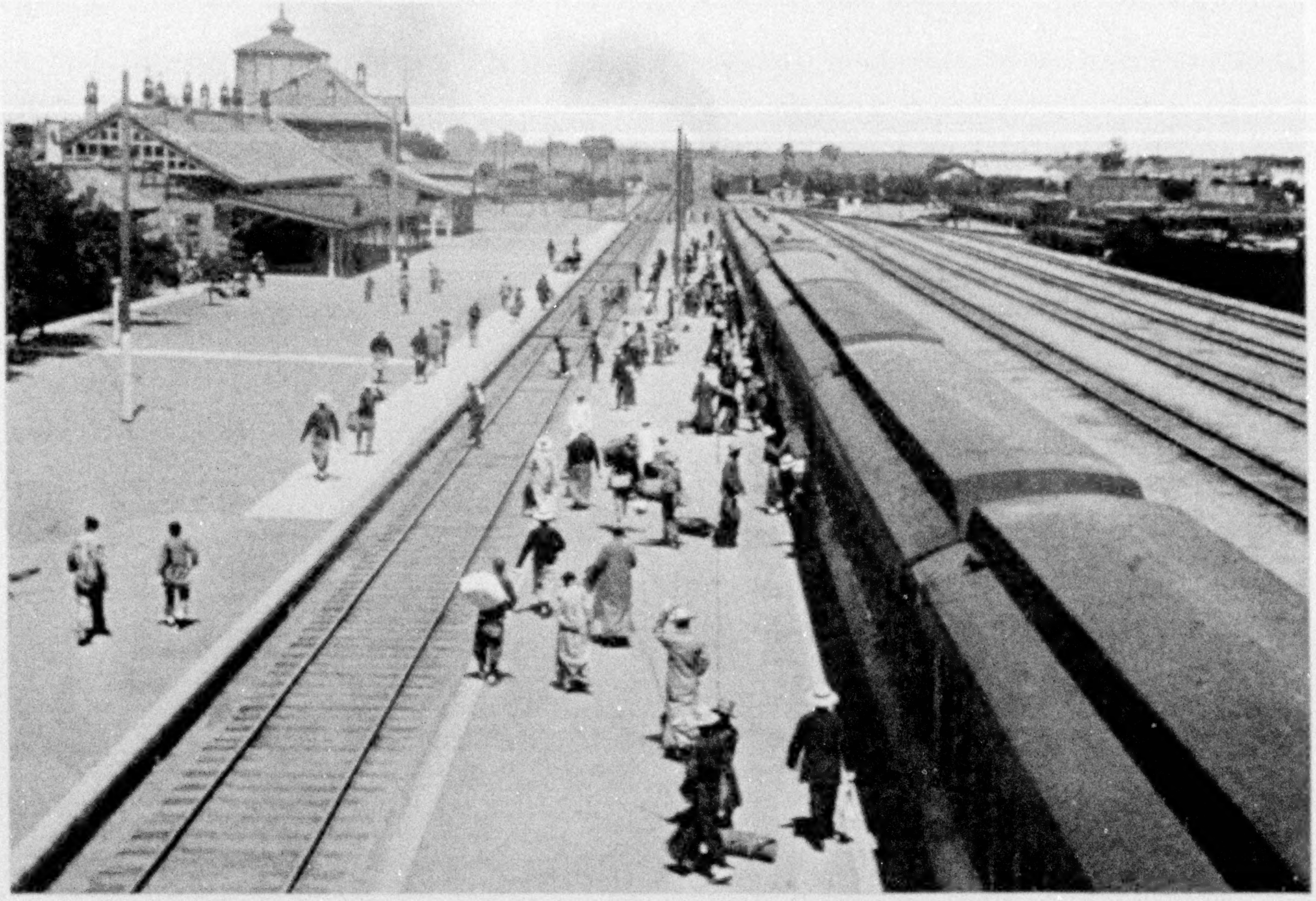
SQUARE-SAILED JUNKS OF DAIREN BAY LOOM AGAINST THE EASTERN SKY



Photograph courtesy South Manchuria Railway

SLIPPING DOWN THE YALU, LUMBER RAFTS FIND A HARBOR AT ANTUNG

Every year between 3,000 and 7,000 rafts are floated down from the upper reaches of this river to the busy port near its mouth. Chinese lumberjacks go to the forests in October or November, cut timber during the winter months, and later lash the logs into rafts for the rising waters of spring and summer to bear away. The Yalu forms part of the boundary between Manchuria and Chosen (Korea) and is one of the great transportation arteries of its region. At Antung, a treaty port, American and British oil and tobacco companies have offices (see, also, page 409).



Photograph courtesy South Manchuria Railway

A CRACK FLYER TO CHINA'S LAND OF PROMISE

Not in Pullmans or day coaches of such luxurious trains as this does the present-day Chinese immigrant travel to his new home. He boards an open box car, if he is lucky enough to have a ticket, for which he may have sold his daughters to get the money. The others must struggle along as best they can on foot, the women with the babies and the men carrying the sick and the aged. The South Manchuria Railway depot at Kungchuling, an important grain market and site of an agricultural experiment station.

Tatar tribes, who were always fighting, either against the Chinese or among themselves, until railways came, millions of Chinese probably would have migrated there long ago. Also, during the long régime of the Manchus at Peking, the latter wilfully restrained their Chinese subjects from venturing north of the Great Wall. A warlike people themselves, they sought to retain the martial spirit of their kinsmen in Manchuria; so they passed stern laws against Chinese migration, that they might not "contaminate" Manchuria with a passion for learning and agriculture.

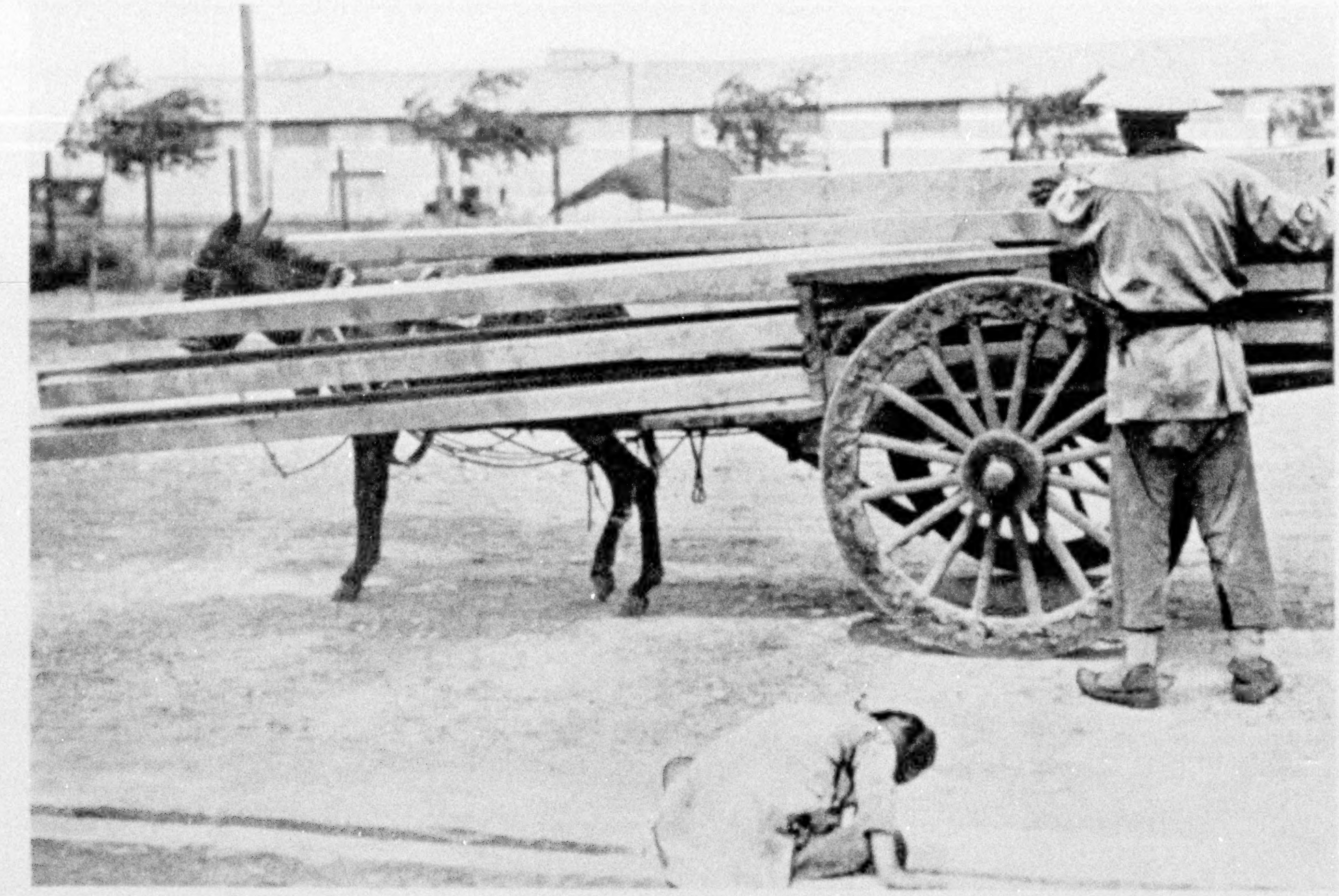
HOW THE MILLIONS ARE MIGRATING TO MANCHURIA

However, even before the Taiping Rebellion, in the last century, the Manchu dynasty, with its famous Bannermen at Peking, had softened after years of easy life in the capital. As authority relaxed, more Chinese began to move to Manchuria, to whose Yalu Valley a trickle of migration had gone on for generations, in spite of regulations.

But the present far-reaching, enormous migration began only in recent years.

I saw it getting under way, after the Boxer War, when Russian soldiers occupied Manchuria. Many coolies went then, to work on railway construction and in building the new towns, bridges, and barracks. Too poor to ride, I saw them, carrying their bundles, trekking north, between Shanhaikwan and Newchwang, like a stream of ants crossing a pavement. Hungry, footsore, cold, they pressed on with that grim, fatalistic patience peculiar to them.

This dismal picture came to mind again, years later, when I saw hordes of ragged, famished peons fleeing from revolution in Mexico, arriving half-naked and exhausted at Arizona and Texas border towns. Probably the Israelites reached the Promised Land in much the same plight.



Photograph by Maynard Owen Williams

PUZZLE: FIND THE DONKEY!

A Chinese teamster at Mukden, his donkey almost hidden by long timbers. In Manchuria, as in America, forests have been wasted and lumber becomes more scarce as additional lands are cleared for farming.

Russia then used to send ships to North China ports to recruit labor. On one such coolie ship, loaded and already cast off for Port Arthur, a riot broke out. Rumor had spread that the coolies, instead of being taken as laborers, were to be impressed into the army. To quell the disorder, ringleaders were lashed to the ship's rail by their own pigtails. Many jumped overboard, pulling out their hair, since it was tied fast, and we saw some drown as they swam for shore.

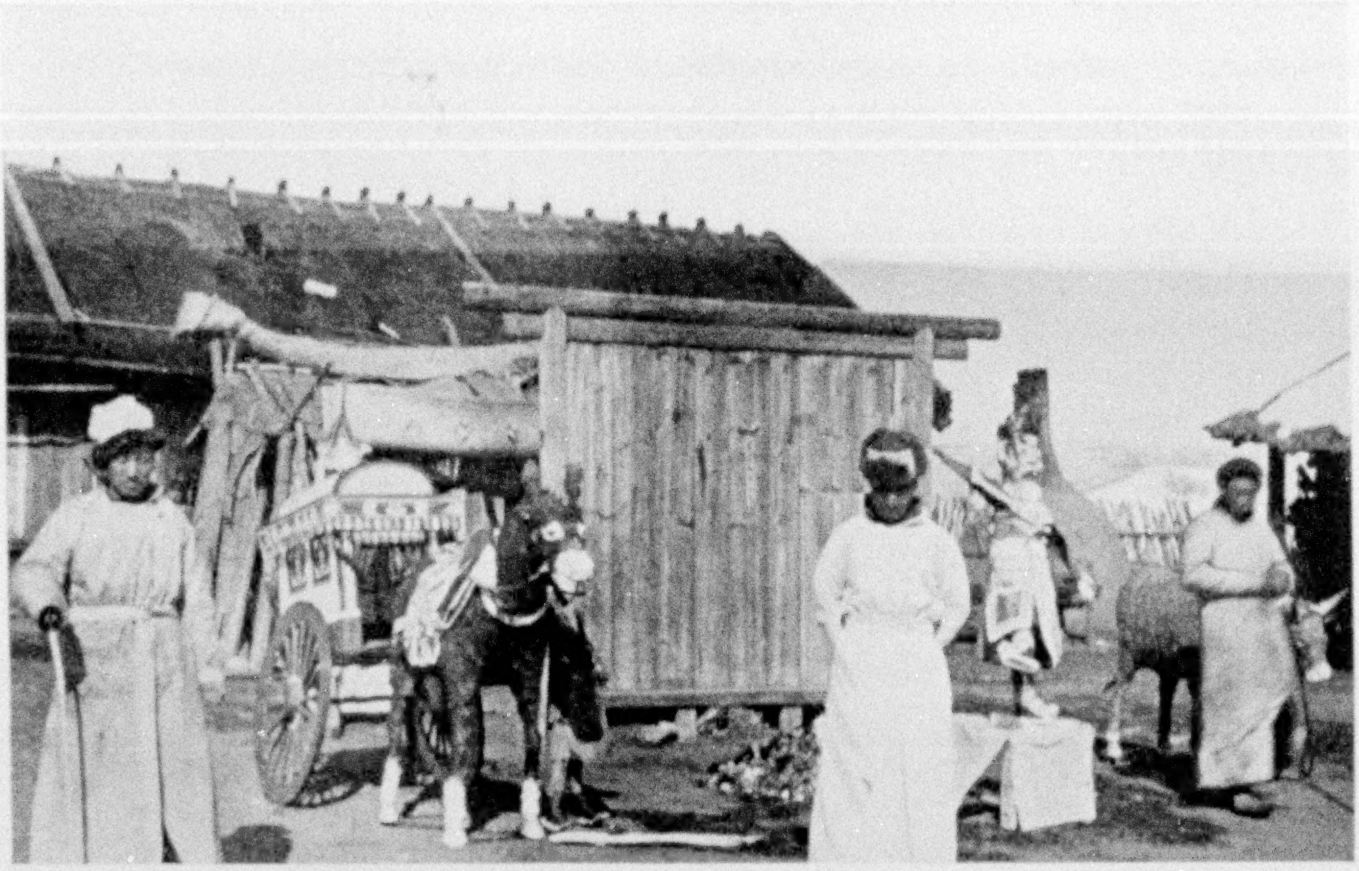
Men alone moved to Manchuria when the trek first started, and often they remained only for a season's work, as do many of the Mexican peons who enter our Southwest each spring. As late as 1925, few women went and no old people. Now whole families join the march, a coolie often carrying his helpless old father on his back.

In this year of 1929 alone, it is estimated, 2,000,000 Chinese are moving to Manchuria!

Carrying babies, pots, pans, and a small bundle of ragged clothes, sometimes chewing grass and even weeds for nourishment, like an army of crawling bugs, these pilgrims swarm out of China. Some go by railway flat cars through the old gap in the Great Wall at Shanhaikwan, others by junk or steamer, from Tientsin or Tsingtao (see pages 409, 410, and 411).

The fare is only a dollar from Tsingtao to Dairen, yet so many thousands ride that this coolie passenger trade is a bonanza to Japanese steamers. Fifteen hundred or two thousand may ride on one small steamer, packed so tight that there isn't room to lie down on deck. Short as the run is, boats get so filthy that, after the coolies are landed, Japanese workers wear masks and use fire hose and scrapers to clean the ship.

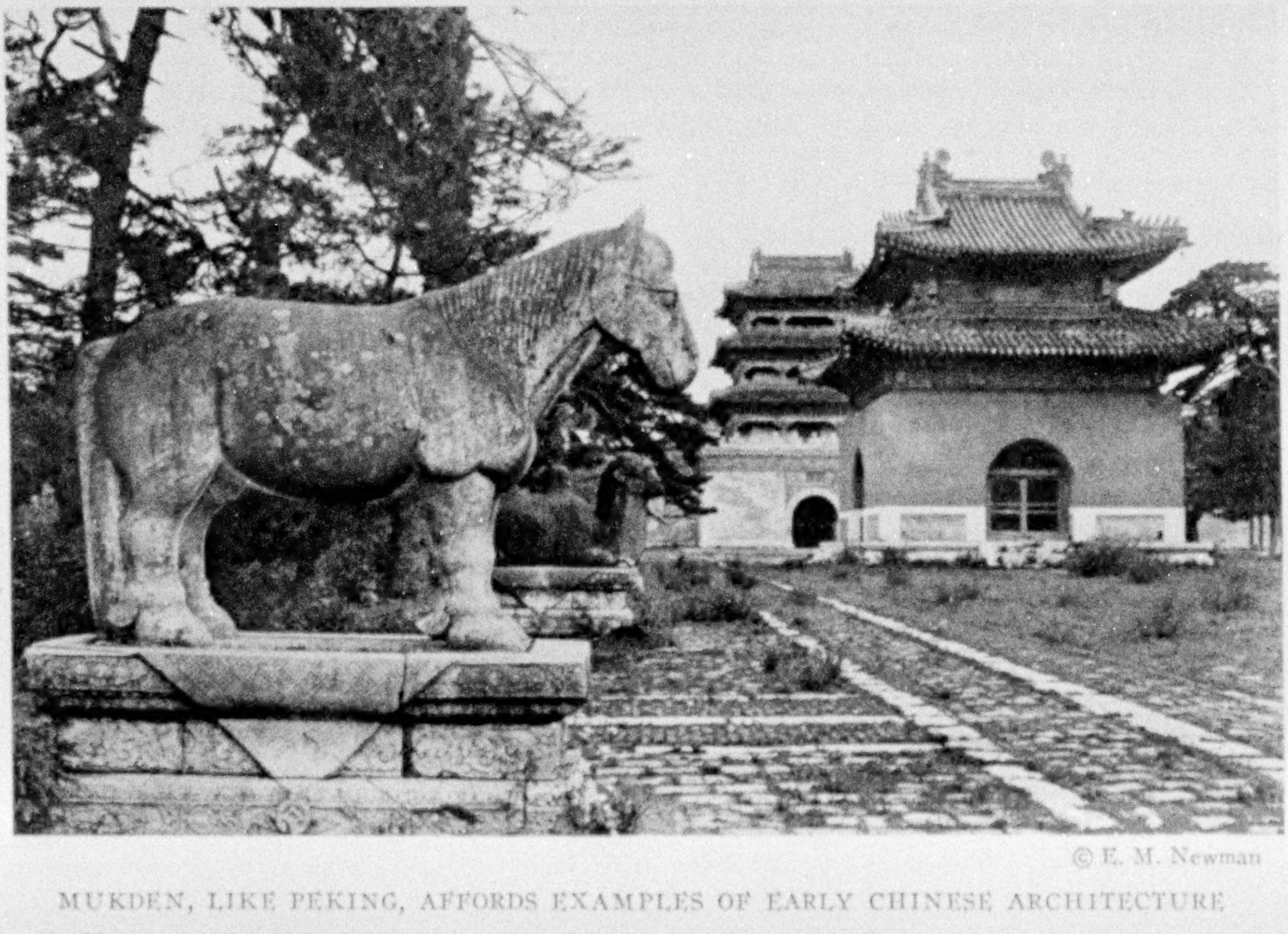
Already South Manchuria is fairly well settled. So the tide now flows through Harbin to regions beyond, there hastily to build mud-and-wattle huts, plow, and plant beans. To aid immigrants whom the railroads want, low fares are granted on the Chinese Eastern; children and old people are hauled free. Once these new



Photograph by Hugh A. Moran

FOOLING THE DEVIL

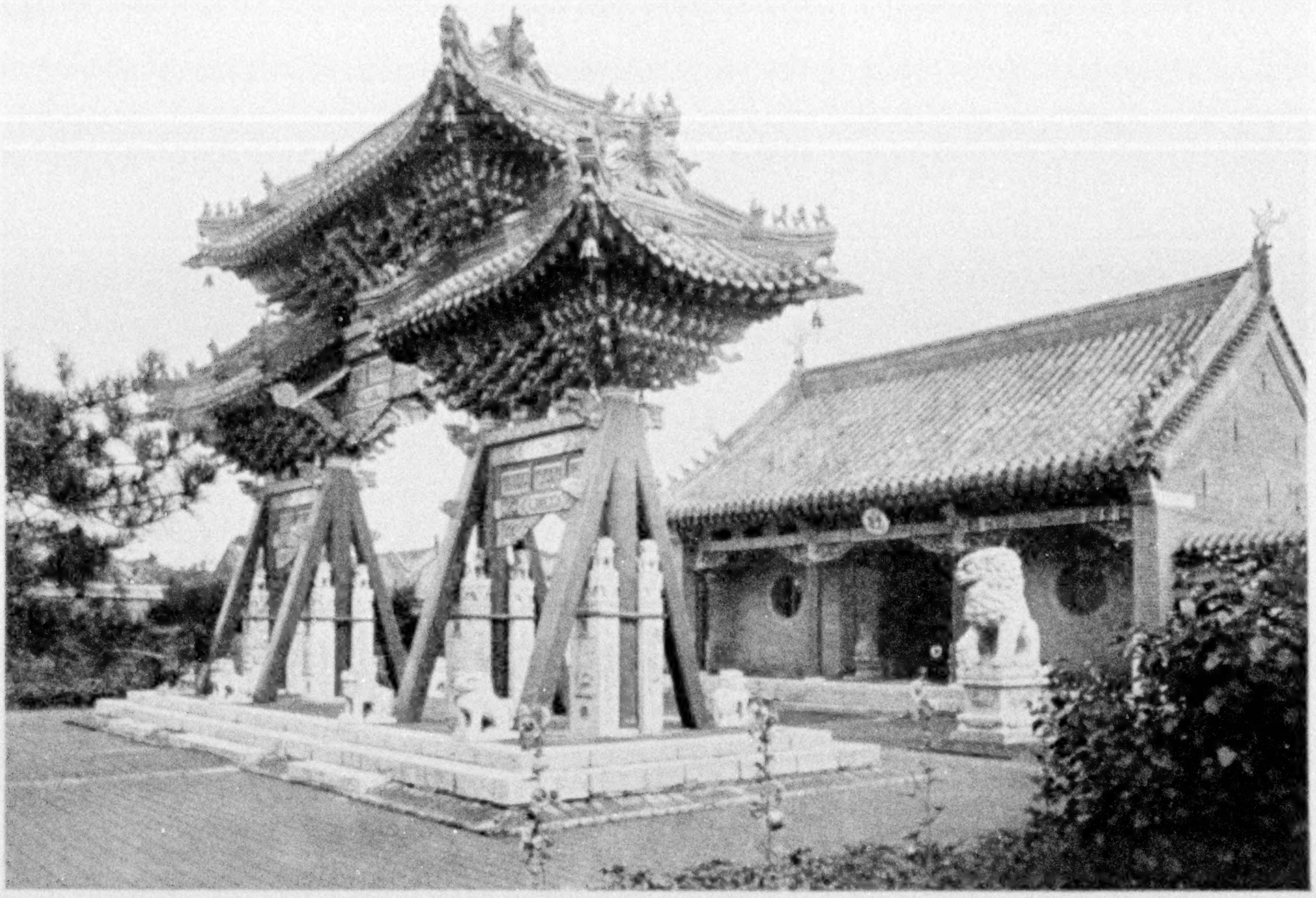
Horse, cart, and ox are made of paper for burning at Chinese funerals. The ruler of the nether world will think that the real cart and animals have been sacrificed and will provide their spirits to serve that of the dead.



© E. M. Newman

MUKDEN, LIKE PEKING, AFFORDS EXAMPLES OF EARLY CHINESE ARCHITECTURE

For centuries Chinese architects have been idle. In times past they produced great works of singular beauty. Old double-walled Mukden, with its palace, drum and bell towers, and outer parks with tombs of Manchu leaders, is the capital of Manchuria. In the Peiling, or north mausoleum, with its approach of stone animals, rests Taitsung, who in 1636 first applied the name Manchuria to the Land of the Manchus.



© E. M. Newman

HERE THE SIGN OF THE EAGLE AND ARROWS GIVES THE YANKEE A WARMING TOUCH OF HOME

The American Consulate at Mukden occupies an old temple in the foreign settlement. At this outpost of trade Uncle Sam's representative handles business pertaining to imports of American machinery, tobacco, construction materials, and other products which Manchuria wants from the United States in return for its own soy-bean oil, bean cake, and especially rich furs—sable, dog, squirrel, and fox tails—which come from the northern borders.

railways hauled hardly any freight at all—only nonpaying soldiers. Now long cargo trains creak across the plains, for the soy-bean crop alone has grown from an indifferent product when the road was surveyed to something like 5,500,000 tons a year (see, also, text, page 413).

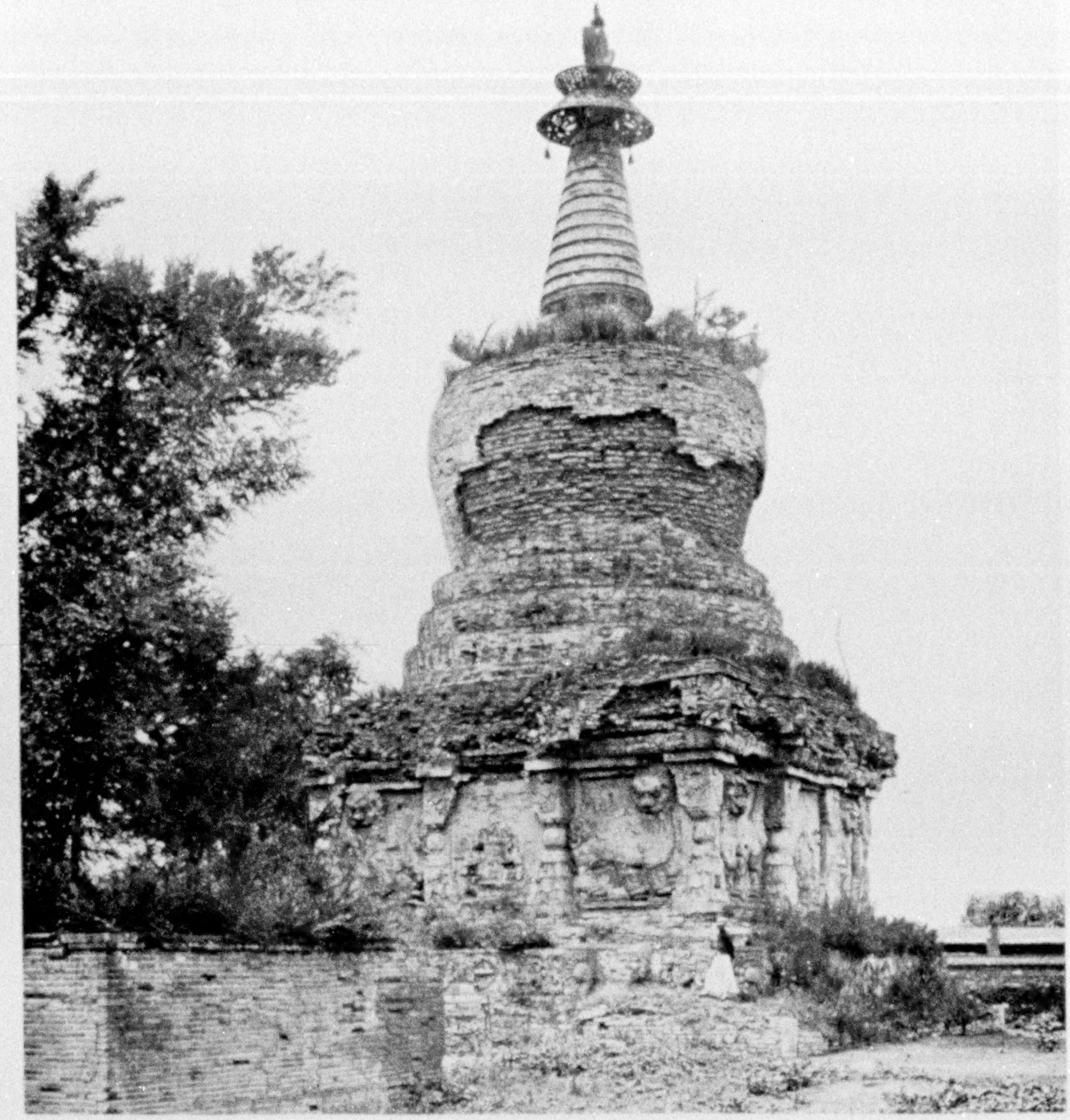
THE "WILD WEST OF THE FAR EAST"

In shape Manchuria is roughly a big triangle, its base on the Amur, to the north. On the south its apex splits the Gulf of Chihli from the Yellow Sea. Chosen (Korea) and a bit of the old Russian Maritime Province bound it on the east. To the west lies the somewhat movable border line of eastern Inner Mongolia and a ruined part of the Great Wall of China.

Nobody has ever surveyed Manchuria as a whole, but guesses place its area at 363,000 to 380,000 square miles, roughly half as big as Mexico; yet its population is already four times as dense. In 100 years Mexico's population has multiplied no more than four times; in 30 years Manchuria's has multiplied probably six or eight times.

It lies in the same latitude as the land from Cincinnati to Hudson Bay. Naples, Berlin, and London are in the same zone. Its climate is the dismay of weather prophets. On the plains its summers may be as hot as those of Kansas or Missouri; yet winter may see the thermometer 20 to 60 degrees below zero. Often high, cold winds whistle down from the Mongolian deserts, just as northwesters freeze the cattle of our West.

One winter at Newchwang, I saw the U. S. S. *Vicksburg* frozen in at her river moorings. Her crew had draped her decks with straw mats. On these snow had drifted, leaving her masts and funnels sticking through, thus suggesting a polar expedition wintering among the ice fields. Ice on the Liao was two or three feet thick then, and we traveled over it in



© E. M. Newman

AGE AND DECAY CLAIM A NOBLE MONUMENT AT MUKDEN

The crumbling lama tower was built centuries ago, when temple-raising was a favorite occupation of kings and emperors. Three others, similar to it, stand about the city. Lamaism flourishes in Mukden, but perhaps a third of her people are Moslems and their influence is strong.

Chinese sleds equipped with sails—crude iceboats. Crossing from Chingwangtao to Weihaiwei, when the spring thaw had started this river ice out to sea, we plowed through vast fields of it. In North Manchuria the Amur and Sungari rivers freeze up in November and are not open for boats till the middle of April.

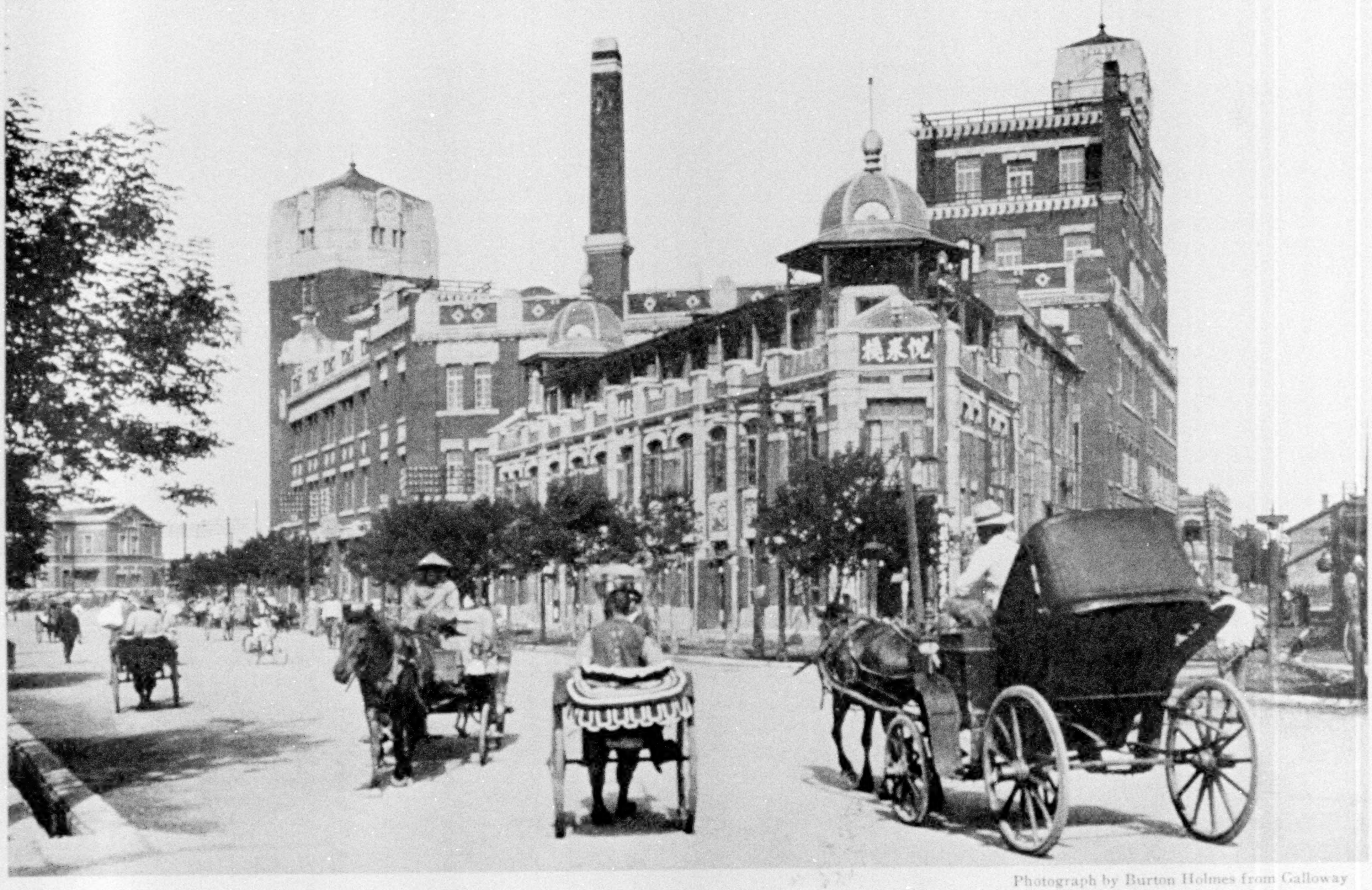
Literally, thousands of small Chinese sailing craft, used mostly for carrying soy beans, crowd the Liao River. I saw a fleet of more than 6,000 laid up at Newchwang at one time. And its valley is amazingly productive. It is a baby Nile or Mississippi of southern Manchuria—by far the richest and most densely settled of all Manchuria's five major river basins. A third of all the vast Mukden Province lies in this Liao basin (see map, page 384).

Farms stretch away, as far as one can see, over the level plains south of Tungkiangkow; but farmhouses do not stand on each farm. Here, as in North China, they cluster in groups, surrounded by high mud

Photograph courtesy U. S. Department of Agriculture

THE CHINESE DISPLACED THE MANCHUS IN MANCHURIA

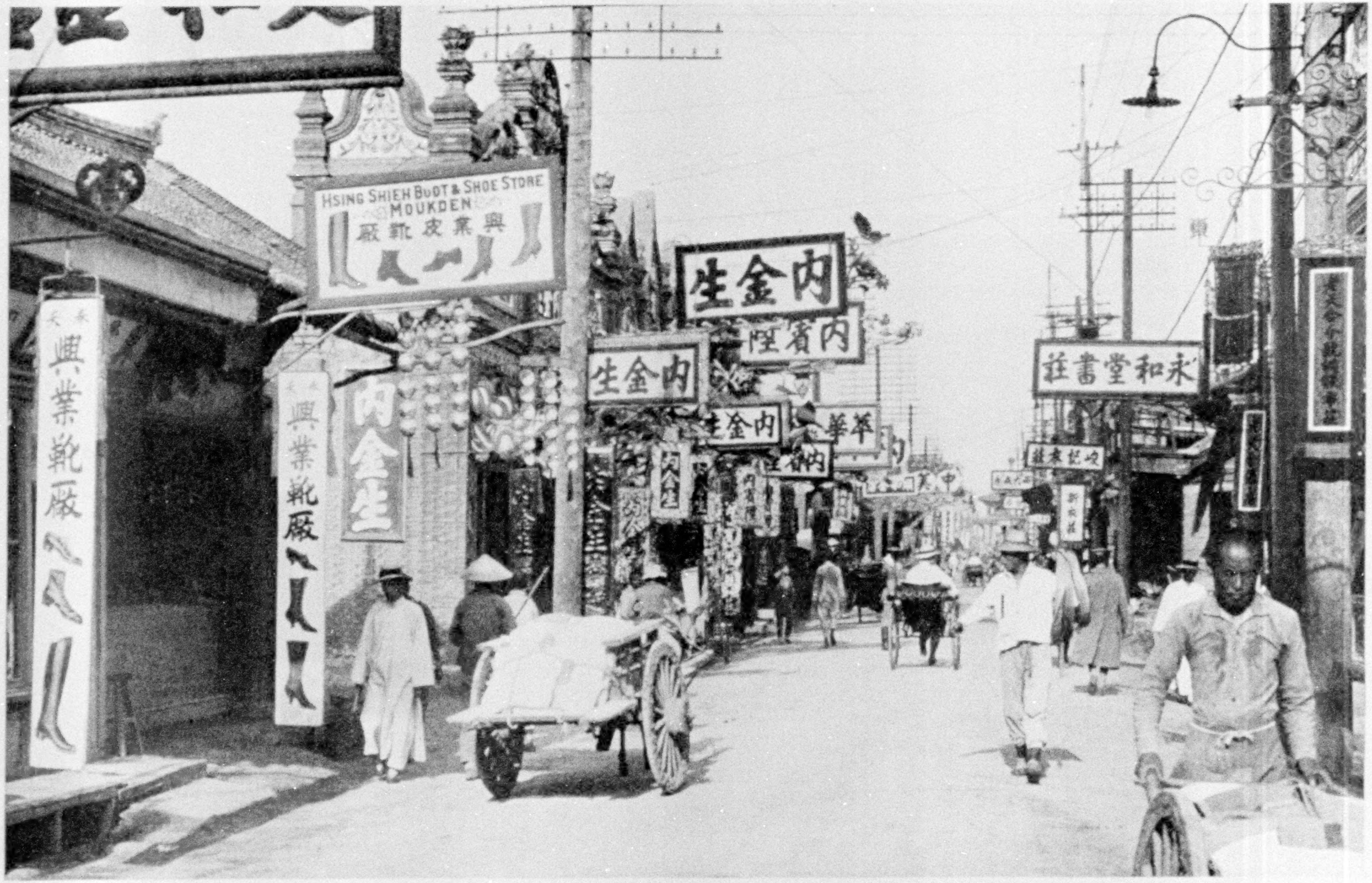
Centuries ago the Manchus drove Chinese immigrants from southern Manchuria back to their native provinces; to-day the process has been reversed, only a tenth of the country's population being Manchu. Before 1926 half the immigrants were seasonal laborers on farms and railways, who returned to their homes in the autumn; now most of them, with their families and household goods, come to stay.



Photograph by Burton Holmes from Galloway

OUTSIDE THE ANCIENT WALLED CITY OF MUKDEN MODERN SETTLEMENTS HAVE SPRUNG UP

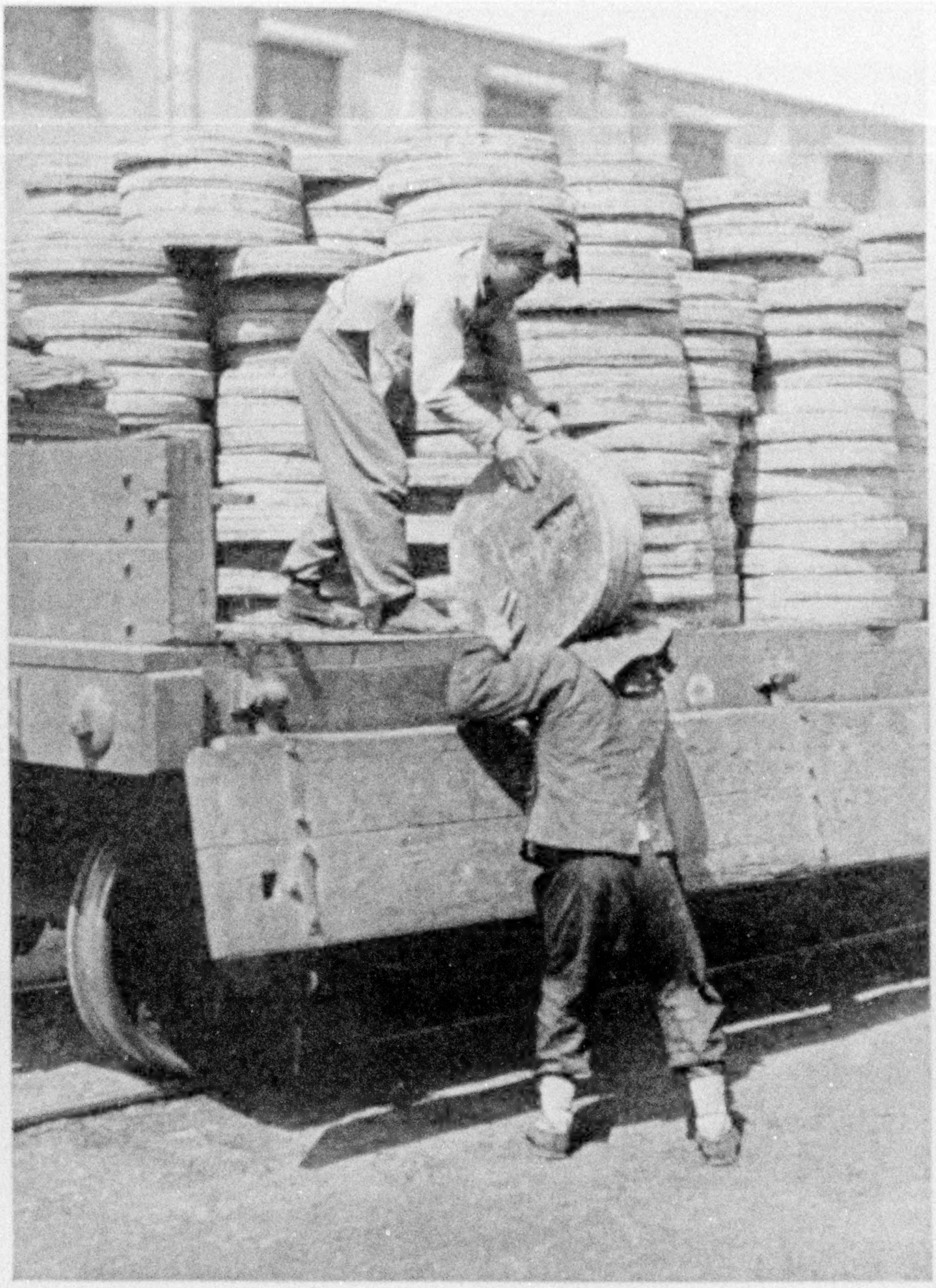
Railway activities center in the new Japanese quarter. Between it and the old walled Manchu capital lies the International Settlement, with its many foreign consulates. In recent years scores of highly modernized homes, warehouses, and office buildings have been erected in this new Mukden, which is in striking contrast to the old (see opposite page).


HSING SHIEH BOOT & SHOE STORE
MOUKDEN
興業皮靴廠
興業靴廠
興業靴廠
內金生
內金生
內賓陞
內金生
永和堂書莊

Photograph by Holmes from Galloway

MUKDEN GAVE TO CHINA AN IMPERIAL LINE OF RULERS

China's first Manchu emperor moved his capital in 1644 from here to Peking (recently rechristened Peiping), where the "Great Pure Dynasty" ruled for 268 years, until China became a republic, in 1912. The teeming streets are lined with carved and gilded shop fronts whose gold and vermilion "beckoning boards" are as gay as any in south China.



Photograph courtesy South Manchuria Railway

UNLOADING CAKES OF THE "MODERN MANNA" AT DAIREN

All the world looks to this busy port and gateway of Manchuria for the greater part of its soy beans and bean oil. Besides its various other uses in the East, in America and in Europe, Italy now consumes soy-bean flour in bread and, to some extent, in macaroni.

walls for protection against the Hunghutze, or ever-active robber bands.

Except when frozen over, the roads here are nothing but ditches of mud or dust. Happily, however, the South Manchuria Railway serves the eastern section of the plain, and part of its west is in the territory of the Peking-Mukden Railway.

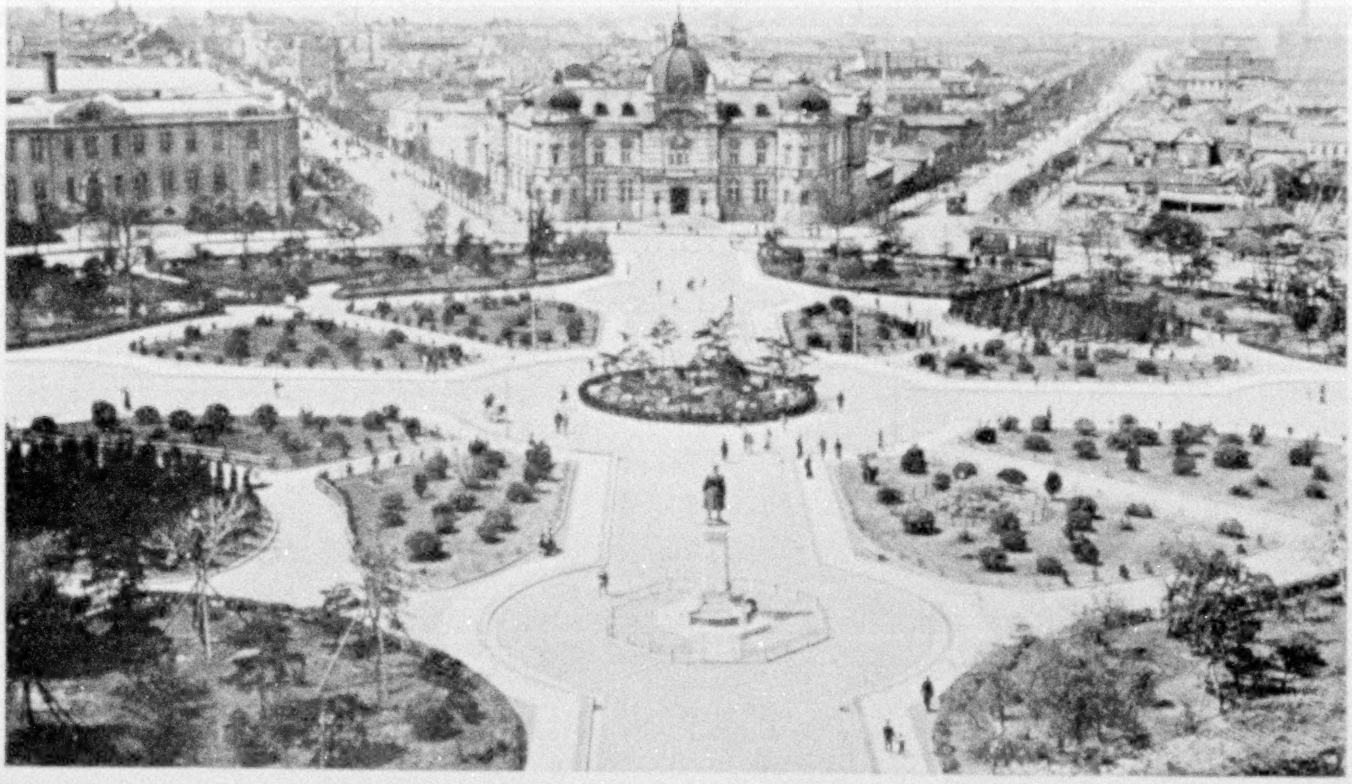
MANCHURIA IS A LAND OF MANY RIVERS

To Americans the Yalu is one of the best-known of all Far Eastern rivers because of the dramatic manner in which Kuroki's army crossed it in that great war with Russia, when, for the first time in modern history, a yellow nation faced a white in a supreme test of men, steel, and high explosives. This great stream, with the Tumen, divides Manchuria from Chosen. The Tumen and the Yalu rise in the same range of mountains. The former flows north and east into the Sea of Japan; the latter roars down to the Yellow Sea. At Antung, over one of the greatest bridges in all Asia, runs the railway from Chosen and the rushing Seoul-Mukden Express.

Scenery here is not unlike the Hudson at the north tip of Manhattan. Smoke belches from the tall stacks of paper, iron, and lumber mills. Batwing junks dot the river, and downstream, after the spring thaws, come huge rafts of logs, on each of which is a hut, where the logger lives during the weeks it takes him to float down. Often he loads a patch of dirt on his raft, also, and there grows spring vegetables to eat on the trip (see pp. 389, 409).

Bustling Antung, with its American and other foreign traders, its "new town" (risen like magic since Kuroki's day), its mills and many joint enterprises between Chinese and Japanese business men, is symbolic of the new Manchuria.

The Ohio, the Mississippi, the Missouri, and Columbia were river valleys which lured Americans when their country was young. It is so in Manchuria; development follows the streams. And the Amur, curving around the country's north frontier, has also played a big rôle in its history.



Pacific and Atlantic Photograph

THE SPACIOUS PLAZA OF DAIREN, MANCHURIA, WITH THE YAMATO HOTEL IN THE BACKGROUND

Laid out like Washington, D. C., the wide avenues radiate from this parked municipal center like spokes in a wheel. Through Dairen, Chinese immigrants coming by boat from Tsingtao and other ports enter Manchuria at the rate of 12,000 a day. This city, which sprang up like a mushroom (see page 386), is the terminus of the Europe-to-Asia railway line.

The weariest river must some time touch the sea. After 2,500 miles the toiling Amur comes to rest in the Gulf of Tartary. To its banks blonde Russians came, away back in 1689, to make a treaty with China—her first with any white power. In time myriad Cossacks draped the river's wooded bends, and the shadow of the Muscovite eagle fell on all that vast country beyond the Black Dragon, as Chinese term the Amur.

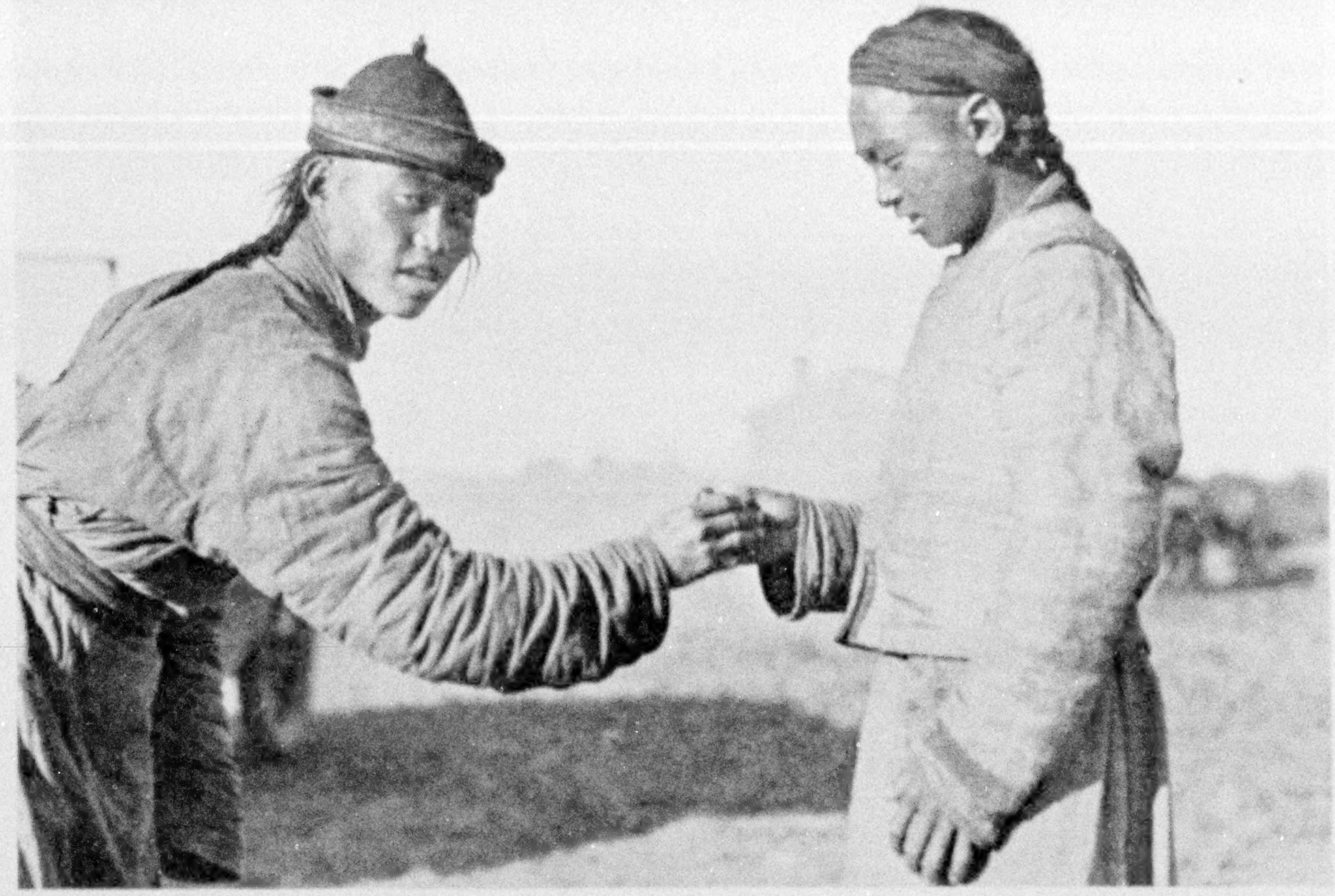
For 2,000 miles this mighty stream is navigable; but, as I write this, Chinese boats never touch the Russian side, and Soviet craft load and unload only on its north bank. War made neighbors of coolie and muzhik, but time has yet to make them brothers.

On its majestic, winding way the Amur is met by the Sungari, another useful river of Manchuria, with a boat and barge traffic similar to that of our own Mississippi. In Manchu, Sungari means River of Heaven. It waters the plains of Kirin Province and serves the gay, turbulent new city of Harbin, Minneapolis of Manchuria, with many flour mills (page 386).

NOW THE WHITE AND YELLOW RACES ARE NEIGHBORS IN ASIA

Harbin is a "case." To social and political psychiatrists it is a curious study, full of implications and connotations. Harbin, like Angora, again stamps the adjective "changeless" as a bogus modifier of the noun "East"; for now the yellow man rules over the white at Harbin; whites work for yellows; and there is even a charity home for Russo-Chinese children, which hints at the beginning of racial amalgamation.

The wreck of society in Russia, the poverty of survivors who fled to Manchuria, and the surrender of police and courts in the railway zone to Chinese brought about this new alignment. True, it is local and affects only 120,000 or more whites; but it is strangely significant; for



Photograph by Leonid Dalevitch

"ONLY OBSERVE ETIQUETTE, AND THE TENT IS YOURS"

Even among the rough-and-ready nomads of the Manchurian frontier, there are a few essential rules of politeness. After a visitor greets his host of the yurt, the usual thing to do is to exchange snuff bottles.

nowhere in all the East—since the early days of Treaty Ports and extraterritorial privileges—have yellow men ever ruled over whites, with the power of arrest and punishment.

And in the East news travels fast, as fast as wireless. Cairo bazaars knew of Chinese Gordon's death at Khartoum before it was officially reported.

In Manchuria, not so long ago, no white man of dignity would be seen carrying even a package of books through the street, lest he lose caste in native eyes.

This was not snobbish; it was wise. It inspired native respect in a land of sharp social distinctions. Chinese share not at all in Western democratic philosophy of the "dignity of labor." Wherever he can, the Chinese saves enough money to avoid working with his hands; he sees dignity primarily in an easy life, reading the classics. In his lighter moods he feeds his tame larks by flipping grain into the air for them to catch as they sing, fights crickets, fans, smokes and drinks with friends where the *sing-song* girls are gayest. Or maybe he's a pigeon fancier and makes little æolian harps of bamboo reeds and ties them under their tails, so the harps play when the birds circle overhead.

Anyway, the traveler who knows the East is amazed now when white men storm the train at Harbin or Mukden to grab his bags, and he sees white men sweeping the streets or subject to the orders of Chinese policemen.

Like Houston or Seattle, Harbin fairly leaped into urban life. When Russian railroad builders came, only one house stood where now rises this gay, colorful, pulsating Moscow of the Far East. It is the only city in all Asia which has nearly as many whites as natives.

RAILWAYS REVIVE A LONG SOMNOLENT LAND

The story of Harbin is the story of what Russia did for the Chinese—opened up a new empire and gave homes to millions. In building the Chinese Eastern, observed Kuropatkin, the equivalent of $150,000,000 went from the pockets of

Photograph courtesy U. S. Department of Agriculture

SOUTHERN MANCHURIA MAY BECOME A CALIFORNIA OF ASIA

Climate is favorable. Apples, pears, peaches, and other fruit crops are increasing in this region, which seems destined to become a Far Eastern fruit belt. Cultivated grapes are one of the prize fruits with the Chinese, but these are a wild variety from mountains near Harbin.

Russian peasants into the hands of Chinese coolie workers.

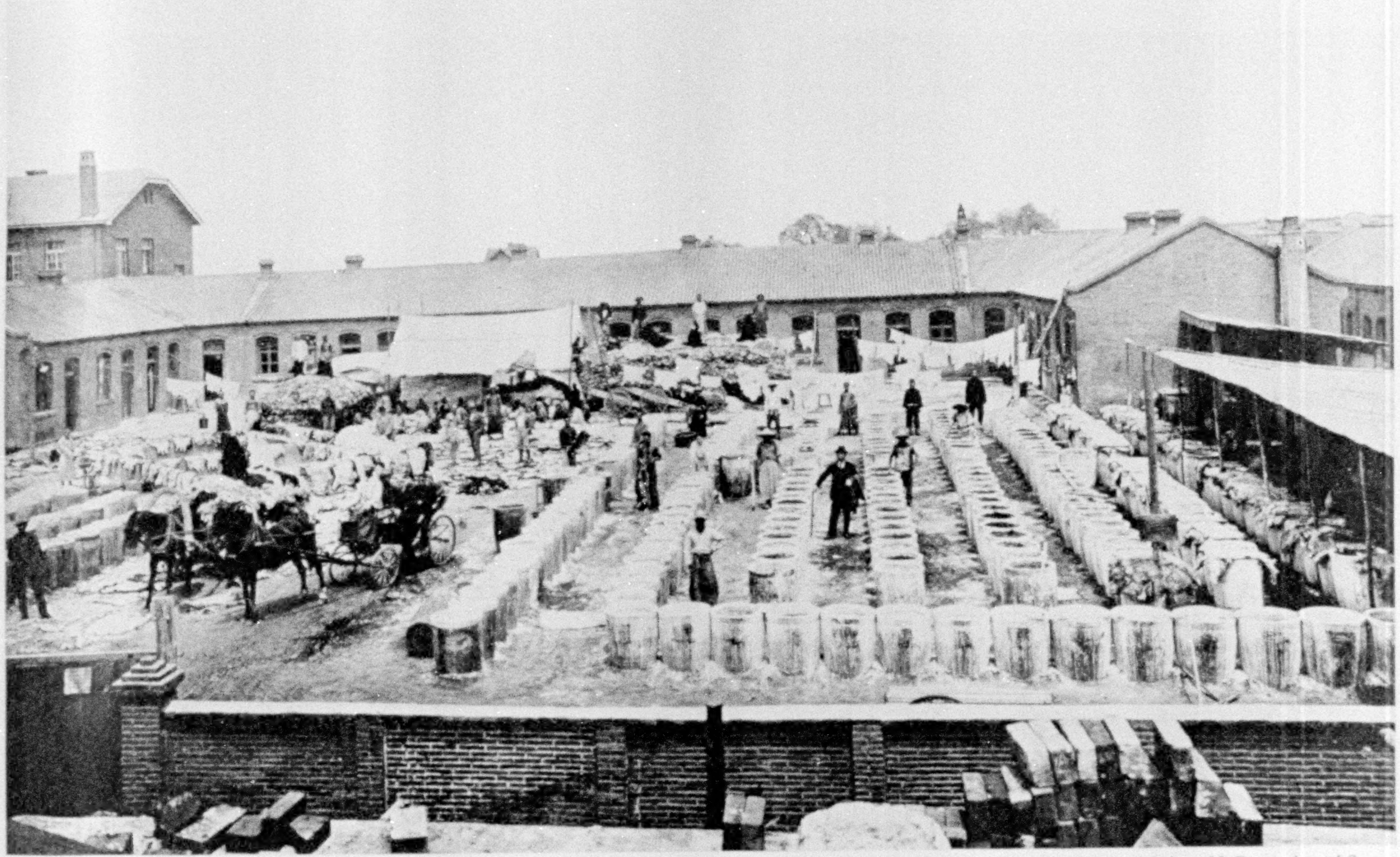
Track-laying started from Harbin in three directions at once—toward Chita, Vladivostok, and Port Arthur. To bring in rails, ties, tools, and supplies from Siberia and Japan, the Russians fairly covered the Amur and Sungari with steamers and barges. No such hectic activity had ever been seen anywhere in Asia. From Khabarovsk to Harbin there came and went a steady line of craft laden with steel, dredges, road-making machines, food, and clothing.

It was this golden flood from the Tsar's money boxes which first moved Manchuria on its almost miraculous path to progress. When, in the Boxer and Japanese wars, still more booted Slavs came scattering money as armies do, more financial fuel was added to the economic flames. So, from its very youth, Harbin was a marvel. Like magic it grew from a cluster of engineers' tents to a wonder city of stately avenues, bean oil and flour mills, fur traders, importers, fine buildings of brick and stone, hotels, theaters, and *cafés chantants*.

Standing on the Sungari, where the railway from South Manchuria joins the Chinese Eastern, midway between Chita, in Transbaikalia, and Vladivostok, on the Sea of Japan, Harbin is the natural center of a vast trade area. It lost some pomp and glory when Imperial Russia fell, but it continues to gain in economic and industrial solidity.

Many American firms, as well as Russian, Japanese, and Chinese, are established here, and Harbin is curiously cosmopolitan. It is the commercial center for the two Manchu provinces of Kirin and Heilungkiang and a part of Inner Mongolia. Siberia, as far west as Irkutsk, once traded heavily with Harbin; but since the Soviets put all foreign trade in the hands of Government agencies this has languished.

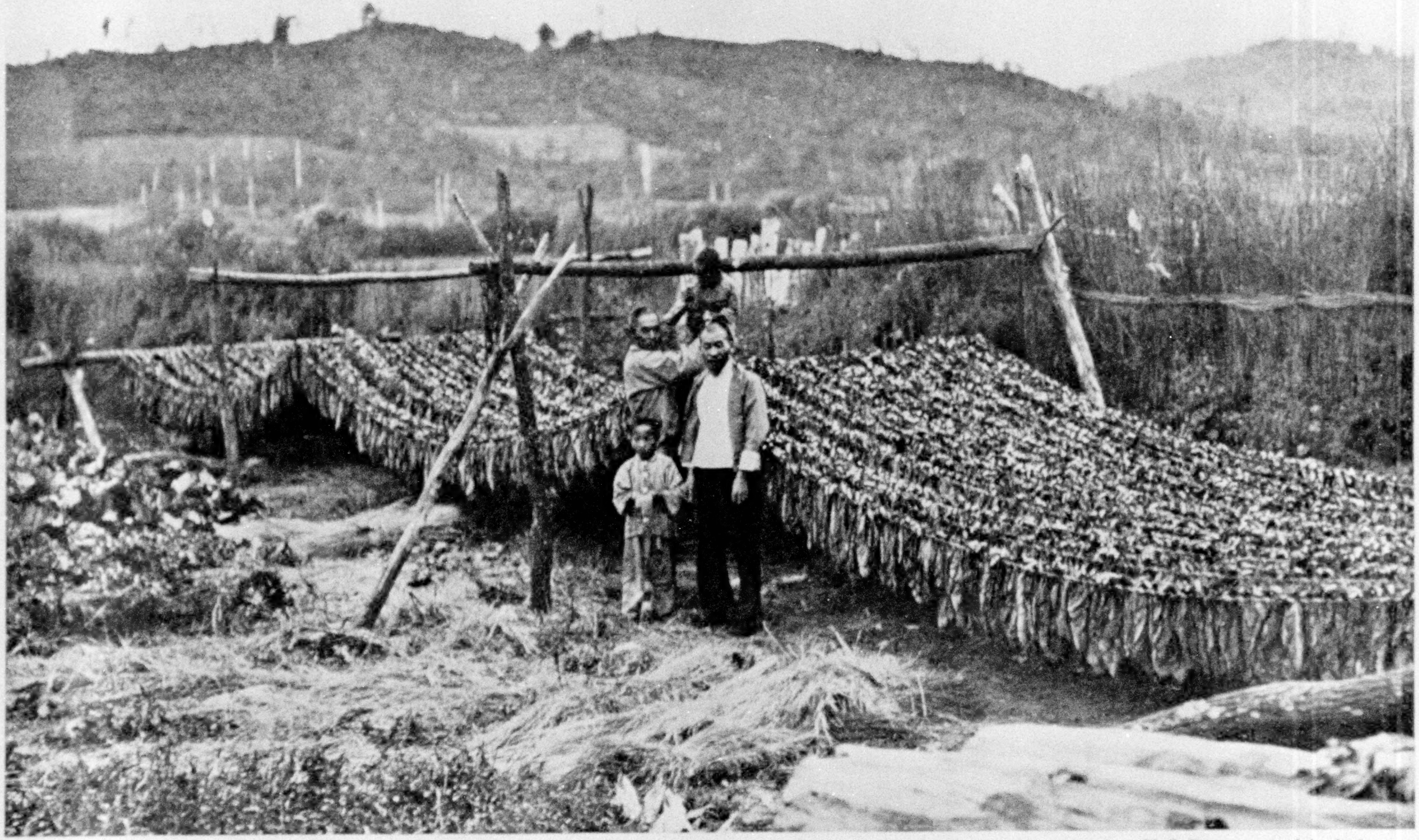
Although Chinese is the common language of Manchuria, Russian is rather the language of trade, and many Chinese have learned it. They must, to do business,



Photograph from M. Bernstein and Sons

HERE DOG AND GOAT SKINS ARE MADE INTO THE "MATS" AND "ROBES" OF TRADE

From China we buy more furs than from any other source. Dog and goat skins form the chief items. After the animals are slain and skinned, their dried and frozen pelts are shipped to local fur markets for treatment, as in this Mukden compound. From Korea come some dogskins, but those from Mongolia and Manchuria are famed in all Asian markets for size, length of hair, and general excellence (see, also, text, page 415).



Photograph courtesy U. S. Department of Agriculture

MUCH MANCHURIAN TOBACCO IS GROWN FROM AMERICAN SEED

Though not exported, Chinese farmers, especially about Antung, grow tobacco for local use. The leaf is very coarse. To improve the crop, the South Manchuria Railway conducts an experimental tobacco farm. It also distributes American yellow tobacco seed to farmers, supervises cultivation, and markets the crop in Mukden. This crop is drying in a field near Harbin.

Photograph by Leonid Dalevitch

A MONGOLIAN INTERPRETER OF HAILAR

To the fairs at Hailar, in northwest Manchuria, come bands of Mongol nomads to trade cattle for cartwheels, leather goods, utensils, and other things the more patient Chinese make. Here, too, as in the bazaars of Baghdad, Bombay, and other oriental markets, trade would be paralyzed but for the nimble-tongued interpreters.

since so few whites can learn that tongue of theirs, once described as "the most imperfect, clumsy, and awkward of all instruments ever devised by man for the communication of thought."

Harbin's trade territory includes more railway mileage than does any other area of China. More than 3,500 miles of track have been laid in Manchuria, and this is being increased at the rate of about 500 miles a year.

Of the present finished lines, more than 2,000 miles belong to the Chinese Eastern System and the Japanese-owned South Manchuria Railway. The remaining mileage, connecting various towns by lines of varying length, belongs to the Chinese, although in most cases Japan advanced the loans and did the construction work. The 392-mile section of the Peking-Mukden line in Manchuria was built with a British loan (see, also, page 385).

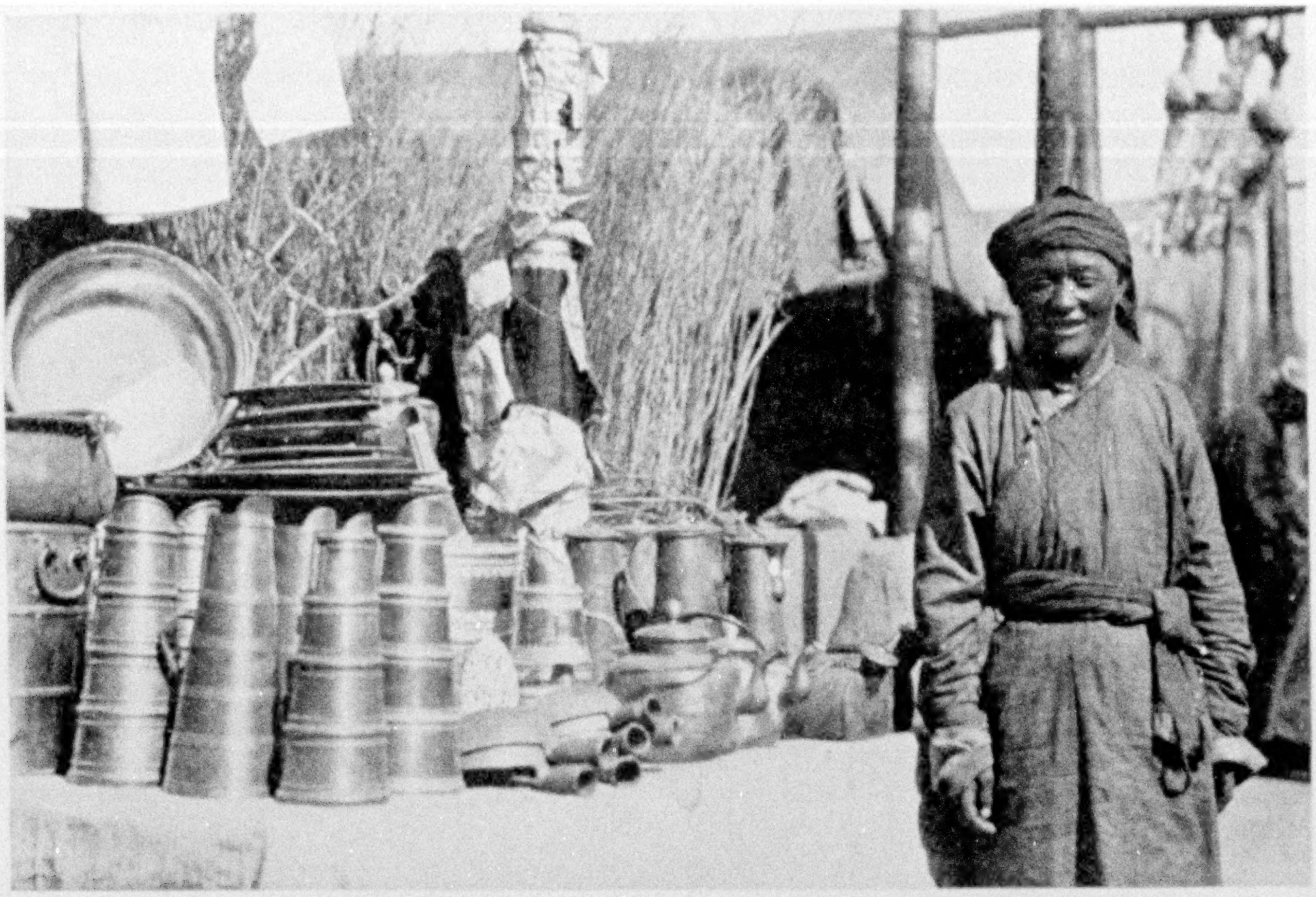
A novel aspect of these Manchurian railways is that, while originally built for military and strategic purposes, unparalleled immigration and farm development now enable them to earn good profits.

HOW THE SOUTH MANCHURIA RAILWAY HELPS SUPPORT JAPAN

The spectacular Flagler railroad over the Florida Keys, the daring push of the long Trans-Siberian line, the war-provoking Berlin-to-Baghdad, the famous Cape-to-Cairo—all these come to mind in the dramatic annals of engineering feats. Theatrical in conception or exploring wild and long-hidden spots on the map, they stir the world's imagination.

Less is heard of the South Manchuria Railway. Yet, in the destiny of the youngest world power, it has become an amazing factor.

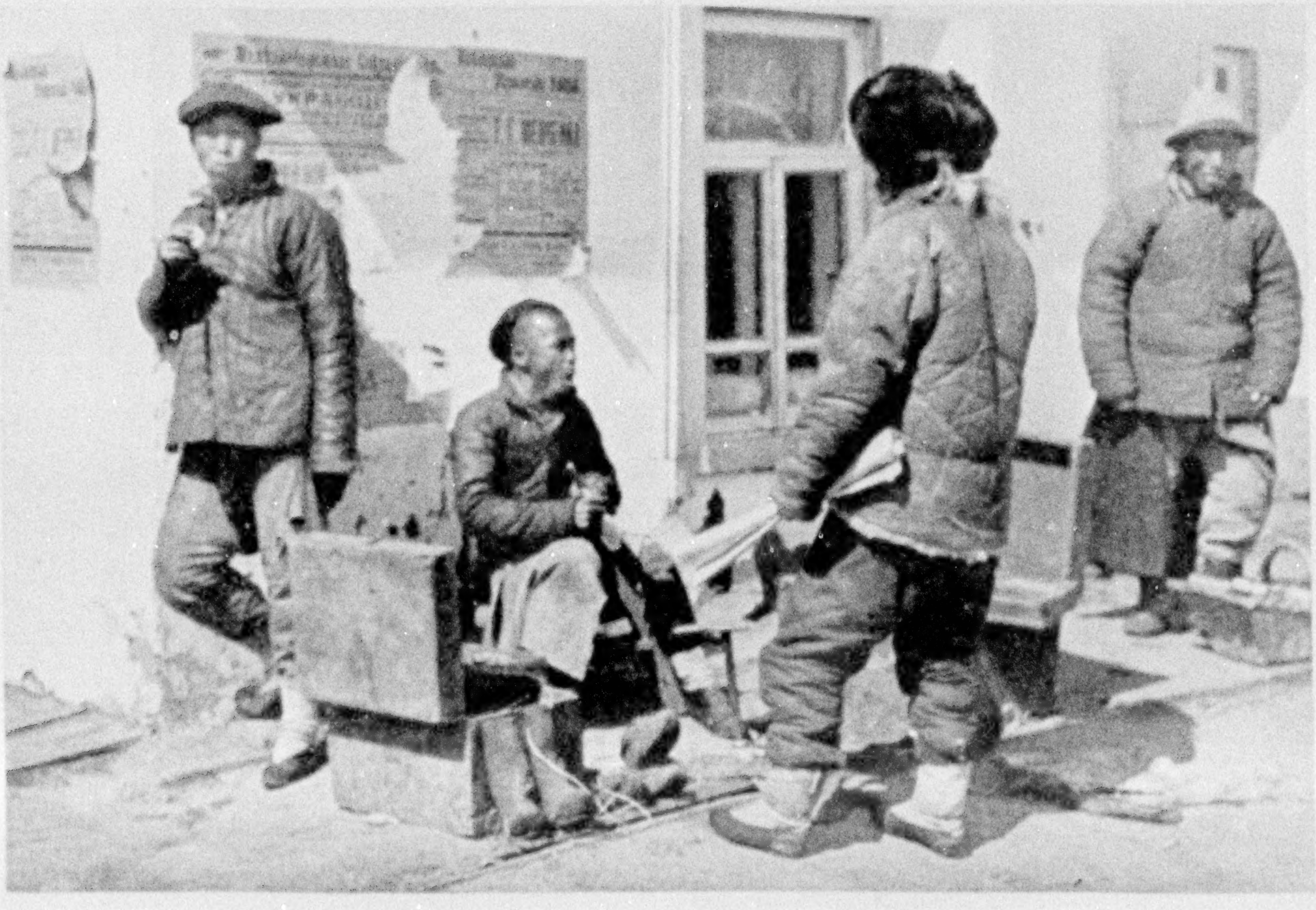
Ride through Japan. Forget the curios, temples, and tea houses, the geishas and frivolous life in the big hotels. Go through the mills or back country, among the hamlets and peasants in the rice fields. See how dense population is; see how even the younger children toil for food;



Photograph by Leonid Dalevitch

"HONEST GOODS AT HONEST PRICES"

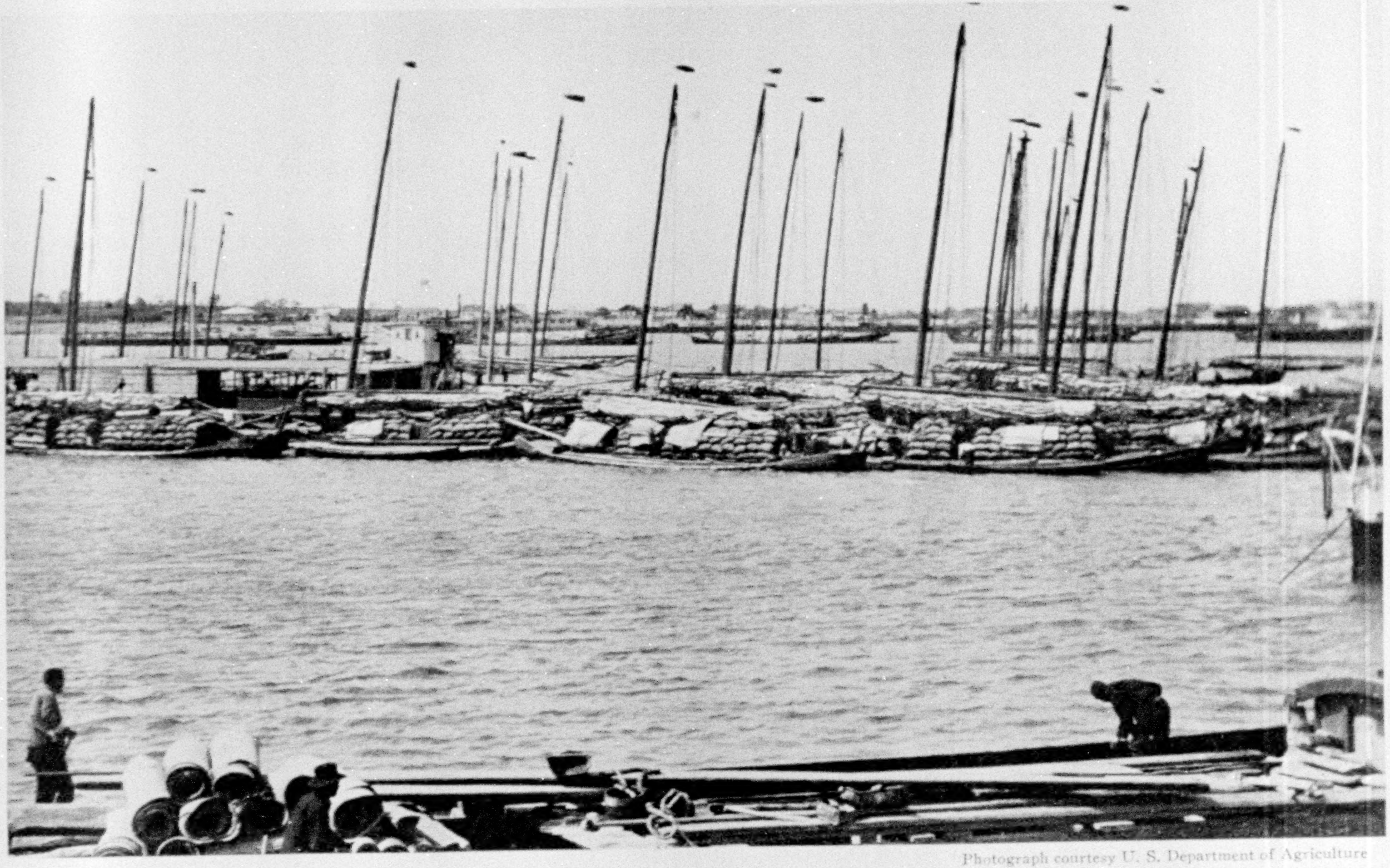
Alleges this trader, who has set out his stock of household utensils at a fair in the Barga District of northwestern Manchuria. It is held every autumn and is one of the biggest events in this region for the frontier nomads.



Photograph by Eugene Lee Stewart

THE SHOEMAKER NEVER LACKS AN AUDIENCE

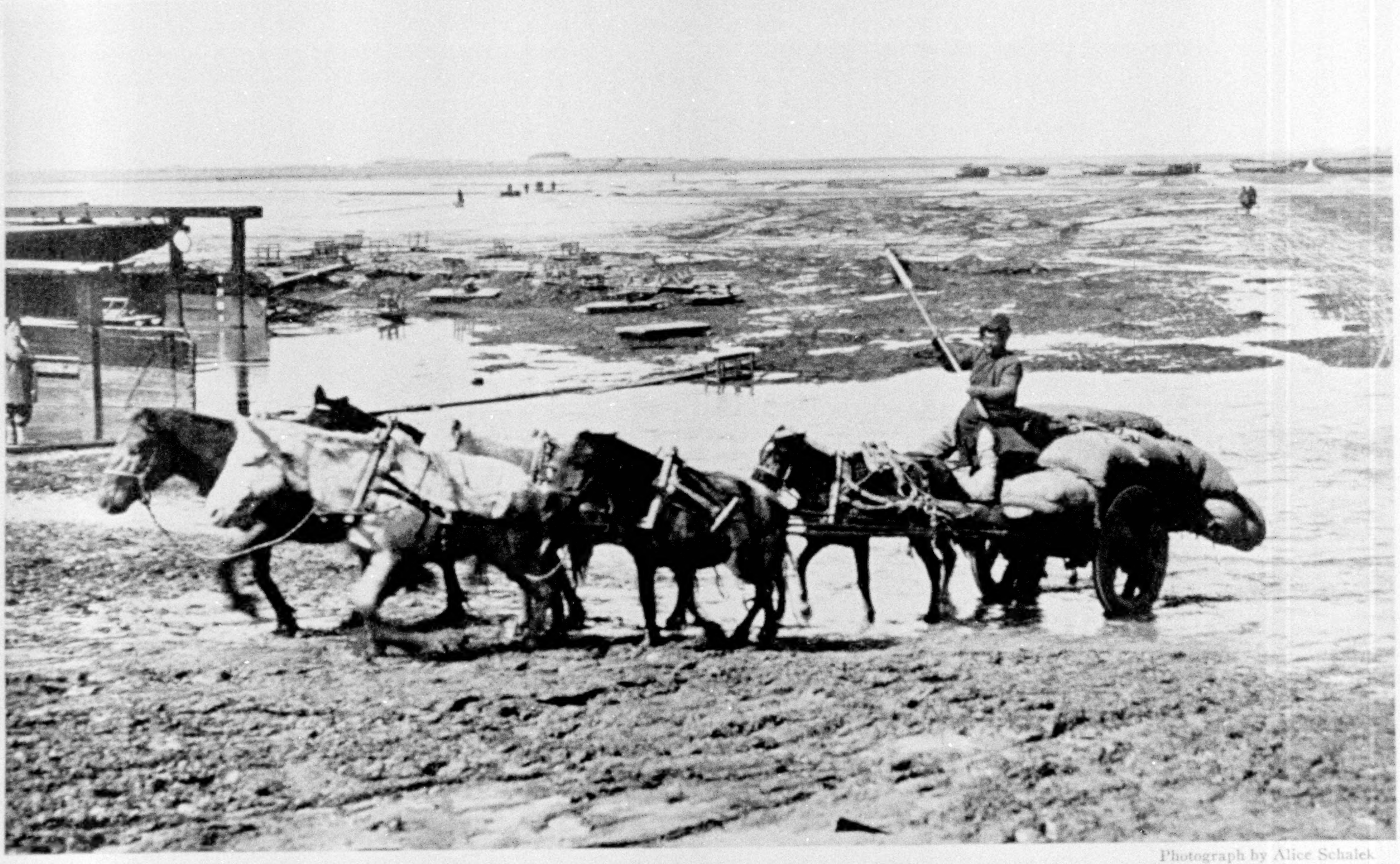
Chinese of Hailar wear winter clothing heavily padded with cotton. If it gets colder, they will put on another wadded suit. The Russian placards on the Chinese store at the back advertise a Ukrainian entertainment at the local club and theater.



Photograph courtesy U. S. Department of Agriculture

A FLEET OF CHINESE BOATS BRINGING BAGS OF SOY BEANS TO HARBIN

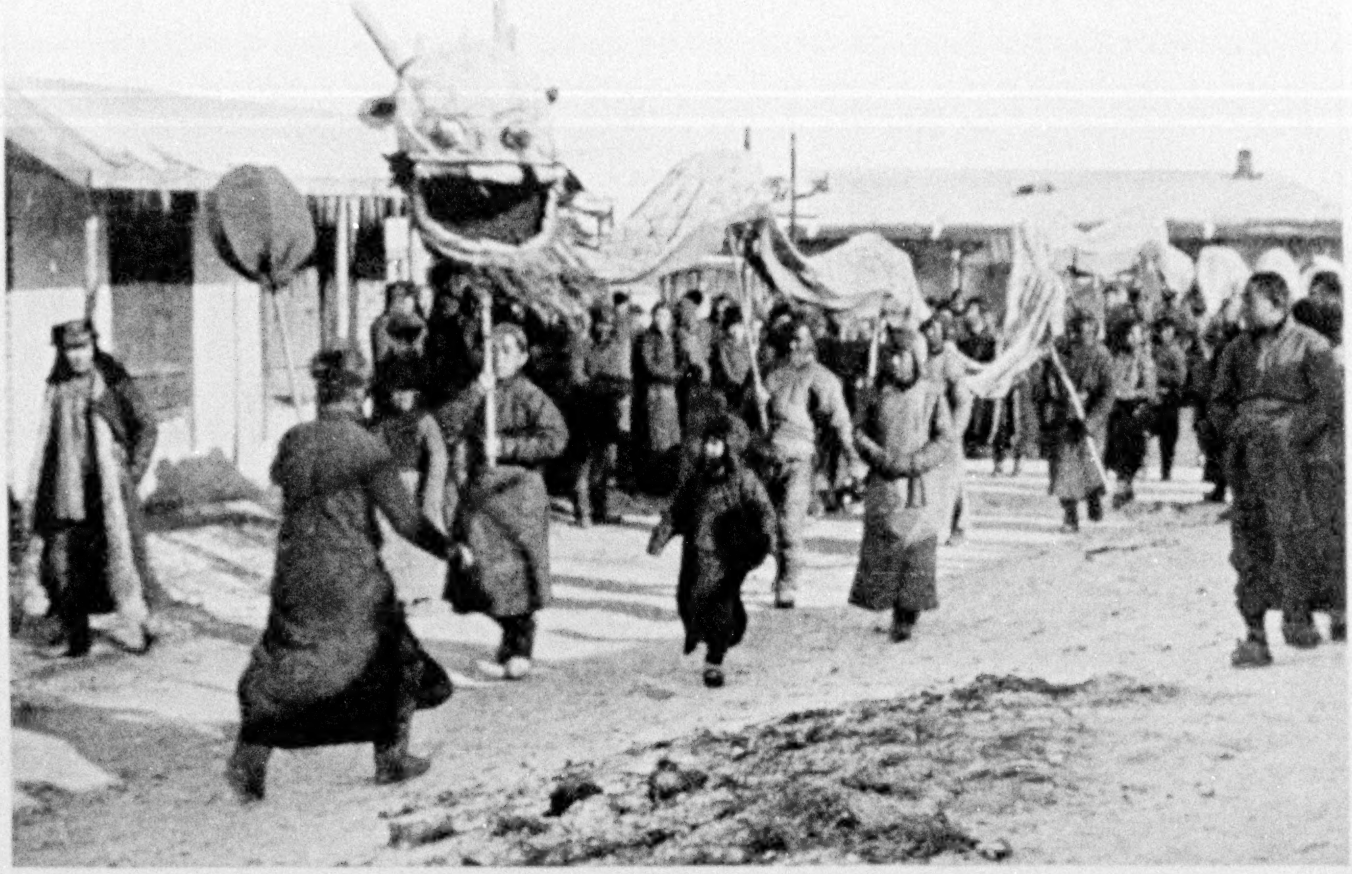
In normal times freight traffic on the Sungari is very heavy. A fleet of steamers is owned and operated by the Chinese Eastern Railway. Native junks and barges also handle quantities of cargo.



Photograph by Alice Schalek

AWAY FROM RAILWAY ZONES AND CITIES, MOST MANCHURIAN ROADS ARE MERE TRACKS ON THE GROUND

Deep, dust-filled trails turn to rivers of mud after a rain, but the clumsy Manchurian carts manage somehow to haul millions of tons of farm products to market. The roads are most passable when frozen hard. Lack of bridges and good roads impedes the import of trucks and automobiles.



Photograph by Eugene Lee Stewart

HAPPY NEW YEAR IN HAILAR ENDS WITH A PARADE

This 10-day event in Chinese life comes later than the Western celebration, and is a mixture of "Fourth of July, Christmas, birthday, and Sunday." Everyone who can buys presents, new clothes, and firecrackers, and all business activity ceases. Prior to the happy day, all accounts are supposed to be settled, lest the debtor lose credit for the next year and have bad luck. All of Hailar's dragon is burned except the head, probably because it costs too much.

and see with what frenzied intensity the island empire becomes industrialized, despite its poverty of raw materials.

Then consider its magnificent South Manchuria Railway, with more than $450,000,000 of assets; study its rôle in the growth and enrichment of this American Middle West of Asia. Then you begin to grasp how, through this busy line and all its kindred works, Japan helps feed herself and find needed raw materials.

To diplomats and military strategists we may leave all debate as to what this line might mean to Japan if menaced by overland enemies from Asia or Europe. Its bread-and-butter aspects alone are fascinating enough.

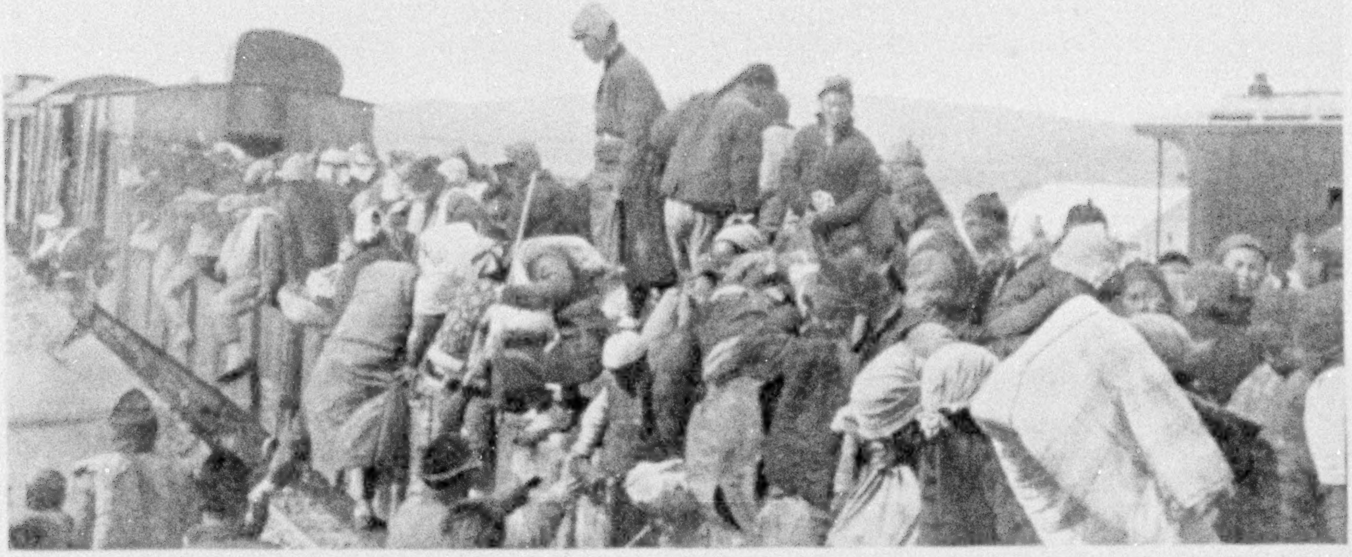
Running across the front porch of Asia, it is the largest single-unit Japanese enterprise in existence. Including coolie day laborers, at times it has in 1929 more than 100,000 people on its payrolls.

It was Russian-built, as we have seen (see text, page 384), as a steel paw of the Bear, reaching down to the ice-free port of Dairen. Ceded to Japan after the war with Russia, it was changed to standard American gauge and equipped throughout with American engines, cars, and machine shops. Then, reorganized as a stock company, the people of Japan oversubscribed its shares 1,066 times!

Sentiment, patriotism, they inspired the public, of course, for 100,000 sons of Nippon had died beating back the Bear. But, also, the line tapped a vast, virgin granary of Asia, with then unscratched riches in wood, wool, iron, coal, bean cake and oil, furs, meats, fruits—the things Japan hungered for.

FEW JAPANESE MIGRATE TO MANCHURIA

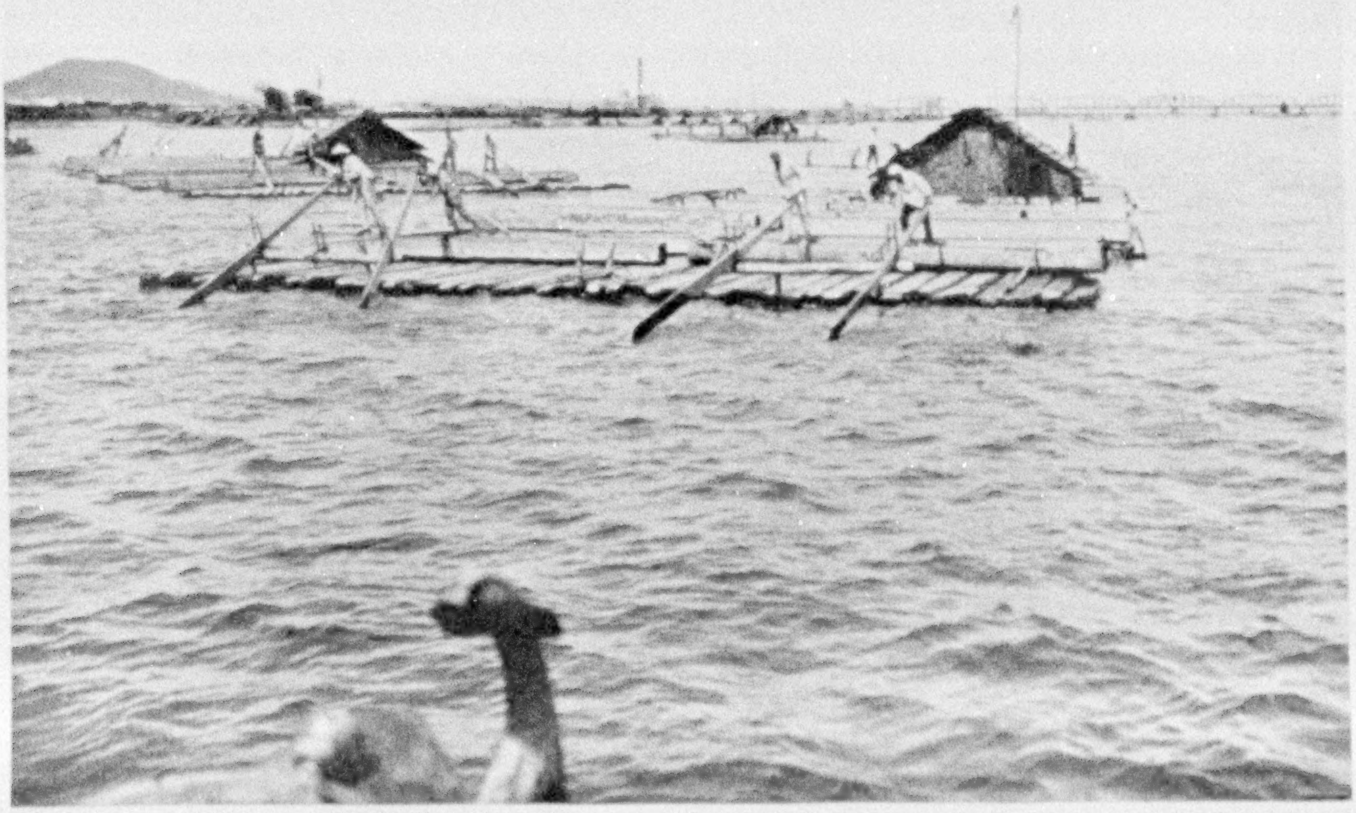
Here was space, too, said a watching world, after Japan leased Liaotung (see text, page 386), where her surplus people could find homes. *But they have not.*



Photograph courtesy U. S. Department of Commerce

CHINESE IMMIGRANTS FLOCKING INTO MANCHURIA

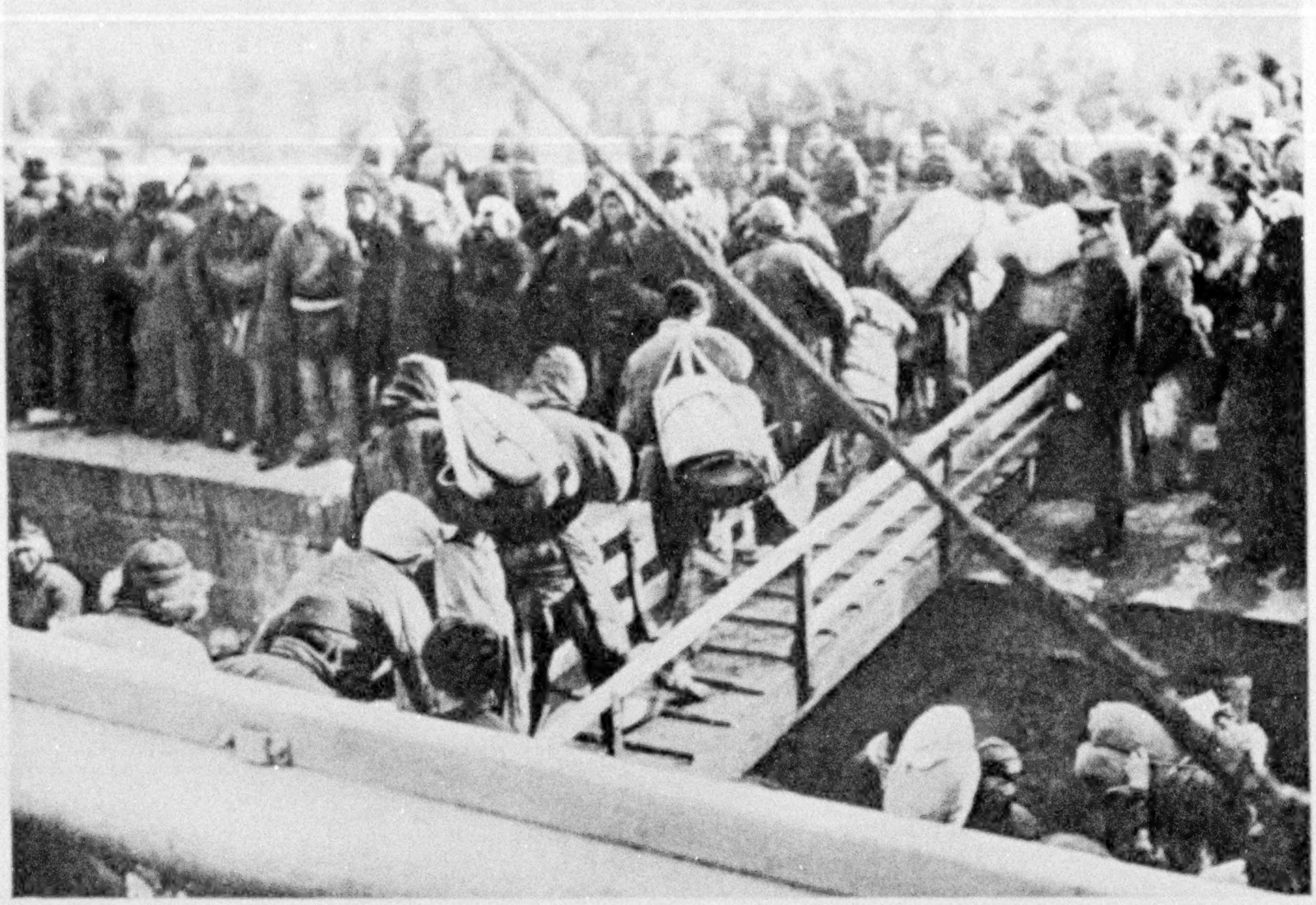
With bundles, pots and pans, and often carrying aged parents on their backs, millions of Chinese are migrating to virgin farmlands in this fertile corner of northeast Asia. Riding flat cars, this motley group is entering the Promised Land over the Peking-Mukden Railway, which runs through a gap in the Great Wall near Shanhaikwan.



Photograph courtesy South Manchuria Railway

CHINESE LUMBERJACKS BRING THEIR RAFT TO THE YALU'S BANKS AT ANTUNG

For their use on the long voyage, lumbermen often pile dirt on the raft and grow a small vegetable garden en route. This lumber trade is diminishing as forests are cut off.



COOLIES WALKING ASHORE TO THE PROMISED LAND

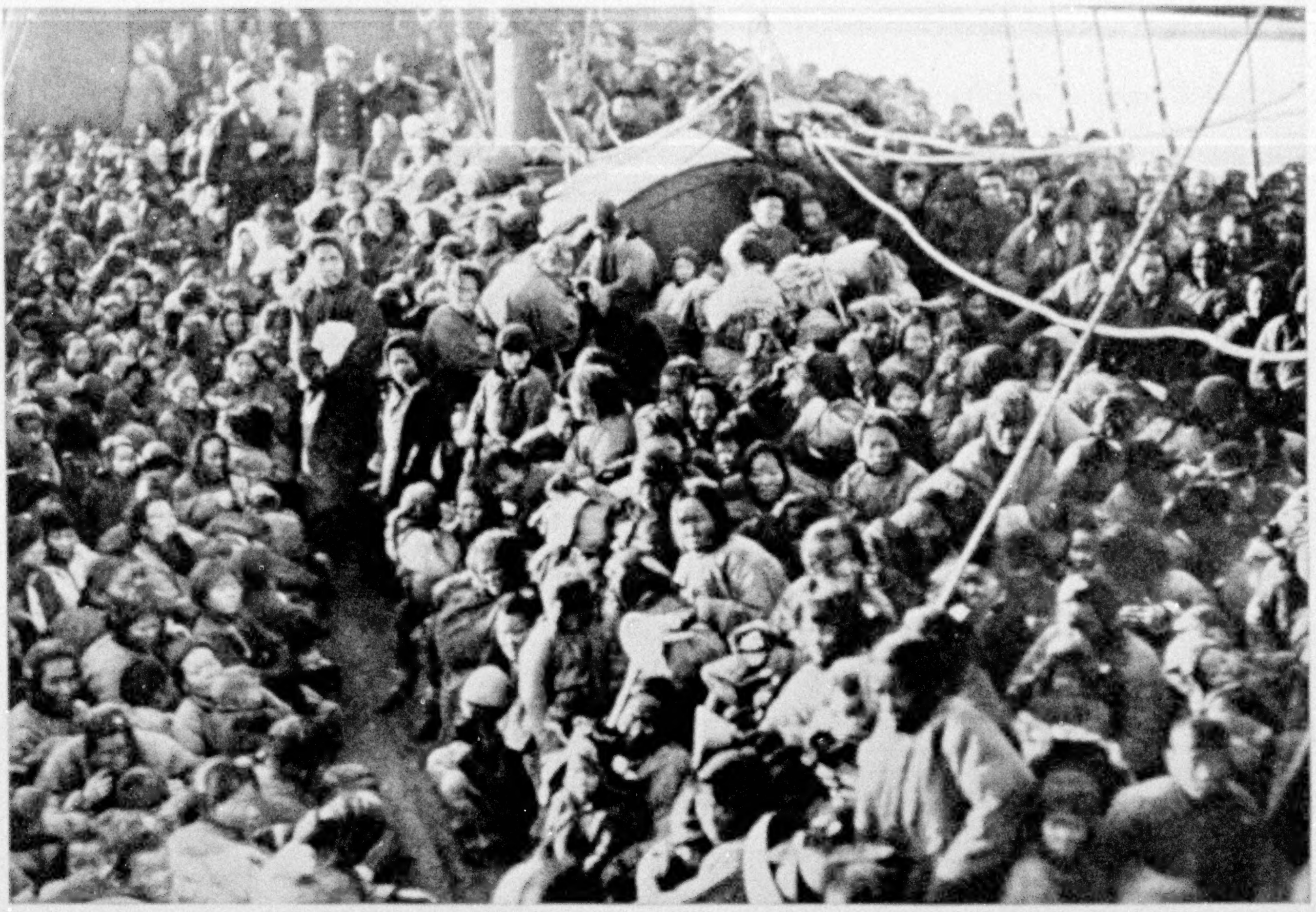
At points in Manchuria where large companies of Chinese immigrants arrive, "same village" committees meet them, so that old village neighbors may be settled near each other in the new country.

In all Manchuria to-day there are less than 200,000 Japanese, and nearly all of them live in the Kwantung Leased Territory and the Railway Zone.

In other words, only a few thousand Japanese have settled in Manchuria proper, since the great migration, compared with millions of Chinese. But since Japan annexed Korea, in 1910, a Korean migration estimated at anywhere from 900,000 to 1,000,000 has crossed the Yalu, to grow rice and other farm crops in Manchuria. And very few of these Korean colonists have settled in the Japanese-controlled areas. Many have become citizens of China.

Could the Japanese farmer have competed with the Chinese, whose standards of living are lower; or could he have found happiness on the great plains, so different from his own hilly homeland of temples, brooks, and cherished institutions, Manchuria might have helped solve the island kingdom's problem of surplus people.

When it became plain, however, that Japanese would not colonize here any more readily than they have done in Taiwan (Formosa), Japan boldly took a new course. With characteristic energy and thrift, with capital and technical skill, she set about to further the farm and commercial development of Manchuria. Her interests there to-day are strategic and economic, and their development is a pivotal point in her foreign policy. She has steadily built up an organization of various units, all smoothly coördinated. These comprise the Kwantung Government, with its military and consular forces; the Government-controlled South Manchuria Railway and its many ramifications; various semi-official banks, produce exchanges, and many privately owned trade and industrial enterprises. Through these broad, far-reaching activities she not only draws an ever-increasing stream of needed raw material, but she also builds up a growing market for her own manufactured goods. And, at the same time, she sees developing, within easy reach, a source of food supply of tremendous potentialities. So far, however, her chief food imports from Man-



Photograph by Underwood & Underwood

MIGRATING CHINESE, PACKED LIKE CATTLE IN A CAR

War and famine, sweeping through densely peopled Shantung Province, impel hordes of peasants to join the great migration to Manchuria. A coolie ship arrives at Dairen.

churia consist of beans or bean oil, largely used as a sauce in cooking, and salt. From British India, French Indo-China, Australia, Canada, and the United States she buys her other chief imported foodstuffs, such as rice, wheat, beef, and fresh eggs.

To develop Manchuria as a further source of food supply, the Japanese are experimenting actively with various farm and live-stock enterprises, and such kindred trades as wool and hides. And, along their Railway Zone, as in the Leased Territory, they are busy in mines, mills, and factories as directors, minor officials, technicians, and skilled artisans. To a large extent, they have coöperated with the Chinese in railway construction, lending money and trained men for this work. But, since the country is so preëminently a farming land, it is the millions of Chinese settlers who really do the work of Manchuria.

Retail trade, also, is almost all in Chinese hands. Following the migrating peasants, many Chinese merchants have come into the country. Often the immigrant farmer, grown rich enough, has turned merchant or banker.

CHINESE ARE THE WORLD'S CANNIEST STOREKEEPERS

In cities like Harbin and Mukden the Chinese merchant has active competition, of course. Here Russians, Japanese, Americans, and other foreigners battle as jobbers and importers, and even foreign-owned department stores flourish, specializing in imported clothing, drugs, toilet articles, hardware, sporting goods, preserved foods, and novelties. But in provincial towns and villages the Chinese-owned store has a monopoly. It supplies not only the more simple wants of poor peasant and prosperous farmer, but also carries patent medicines, alarm clocks, music boxes, bicycles, perfumes, soaps, cheap jewelry and watches, and all the trash dear to the heart of middle-class Chinese and middle-class people everywhere.

But the Manchuria Railway, most monumental of all Japanese enterprises, is not remarkable as a railway alone. In fact, its many associated activities and

XUM

Photograph by C. Walter Young

MILLIONS OF MANCHURIAN CHINESE LIVE BY GROWING SOY BEANS

A visitor arriving at any Manchurian seaport or busy railroad station after harvest time is utterly bewildered at the almost incalculable piles of beans heaped high on every side. Cleaning beans at a freight yard.

economic ramifications have caused it to be sometimes styled the "East India Company of Manchuria."

That narrow 686-mile strip of Japanese leased right of way through which the line runs has been compared to the American-owned Panama Canal Zone for neatness and efficiency of administration. With its chain of tourist hotels, its model schools, kindergartens, hospitals, laboratories, and farm experimental stations, all set up and operated for the development of Manchuria, it is indeed a singular force for Western civilization in Asia. Through its agency Japan applies locally what she has learned from America and Europe.

ONE OF THE WORLD'S RICHEST COAL FIELDS

Long ago wandering Koreans, venturing into South Manchuria, stumbled over black rocks sticking out of the earth—"rocks that would burn." This may have been among man's first uses of coal. But, later, mining was forbidden by Manchu princes, lest it disturb the rest of ancestors buried about Mukden.

In time, of course, the Chinese, and then the Russians, came to work these coal deposits; but large-scale production came only when the Japanese acquired the railway. With American aid and advice, they put in modern machines and methods and opened up one of the thickest coal seams ever found anywhere. In places, the vein measures 420 feet. This famous Fushun field lies to the east of Mukden, and its output has reached 7,000,000 tons in a single year (see page 424).

As Mexico buys three-fourths of her imports from the United States, so, lying so near by, Manchuria buys heavily from the Japanese.

You can grasp quickly the astonishing extent to which Japan is working for herself, yet building up economic Manchuria, when you look at the tip of Liaotung Peninsula. Crowded into that Leased Territory are probably 300 or more manufacturing plants and industries, employing more than 800,000 people, mostly Chinese. The wide scope of progress is revealed here in many iron works, chemical and

BRANCH BANKS ABROAD ARE OUTPOSTS OF AMERICAN TRADE

Lately erected at Mukden, flying the flag, and flanked by American-made motor cars, this branch of a great New York banking house reflects the 20th-century tendency of American commerce to attain and hold a permanent position abroad.

soap factories, brickyards, bean-oil mills, car and wagon shops, lumber yards, shipbuilding, printing, cement, and other plants.

SCIENCE NURSES NEW INDUSTRIES

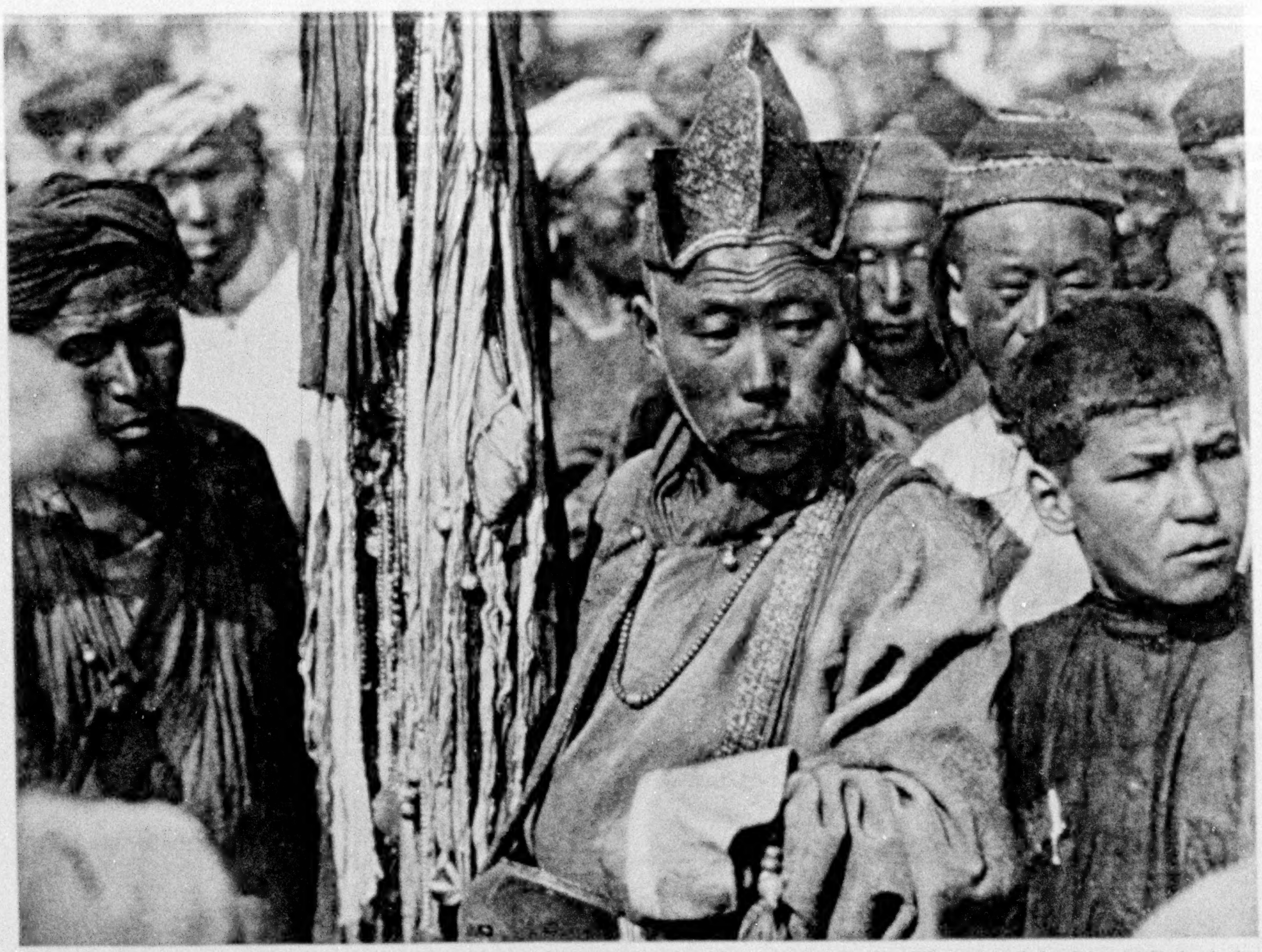
Outside the area leased by Japan, important industries also thrive. The "big three" are bean-oil mills, flour mills, and distilleries that make a drink from kaoliang, a sorghum plant.

In the great soy-bean industry one sees again the pioneering work of Japanese. Up to 1910 this bean was not active in world trade. Since then, aided by experiments in the chemical laboratory of the South Manchuria Railway at Dairen, many uses for it have been found. It has made its way into soup, soap, cheese, salad material, explosives, enamels, varnishes, linoleum, water-proofing, paints, printing inks, lubricating oils, flour, macaroni, and crackers. Bean cake solved the fertilizer problem of Japan, whose increasing millions must plant in rice every possible foot of their old, worn fields.

The value of Manchuria's annual farm yield is reckoned at about $500,000,000, of which the soy bean is the leading item. To aid Chinese farmers, the Japanese carry on research work at Kungchuling and other experimental farm stations. This has increased production per acre and improved the oil content of the beans.

In America we see science seeking new materials and finding new uses for old ones. It is so in Manchuria, too. In this work the Japanese, to whom a prosperous Manchuria means so much, are leaders. Active far beyond its function as a carrier, we find the railway engaged in wide research work at its laboratories, in quest of new materials and methods which may lead to sound commercial enterprise. In its experiments with pottery, the wild-silk industry, textiles, oil distillation from shale, firebrick and glass, as well as its development of iron and coal deposits, it has aided tremendously in the growth of local industries.

Such facts are not mere guidebook dry bones or dreary dust from consuls' files.



Photograph by Leonid Dalevitch

TOO MANY IDLE LAMA PRIESTS MAKE A SERIOUS SOCIAL PROBLEM FOR MONGOLIA

Every family dedicates one or more sons to the priesthood. They become an ignorant, idle body of men, parasitic upon the lay population, which must constantly struggle to support them. They rule their superstitious, easily frightened flock by a religion of terror, for Lamaism, a corrupt offshoot of Buddhism, has demons and other evil spirits who must be placated.

Set in sequence, they form the fascinating plot of that drama which is changing this long-empty Asian area into new homes for migrating millions.

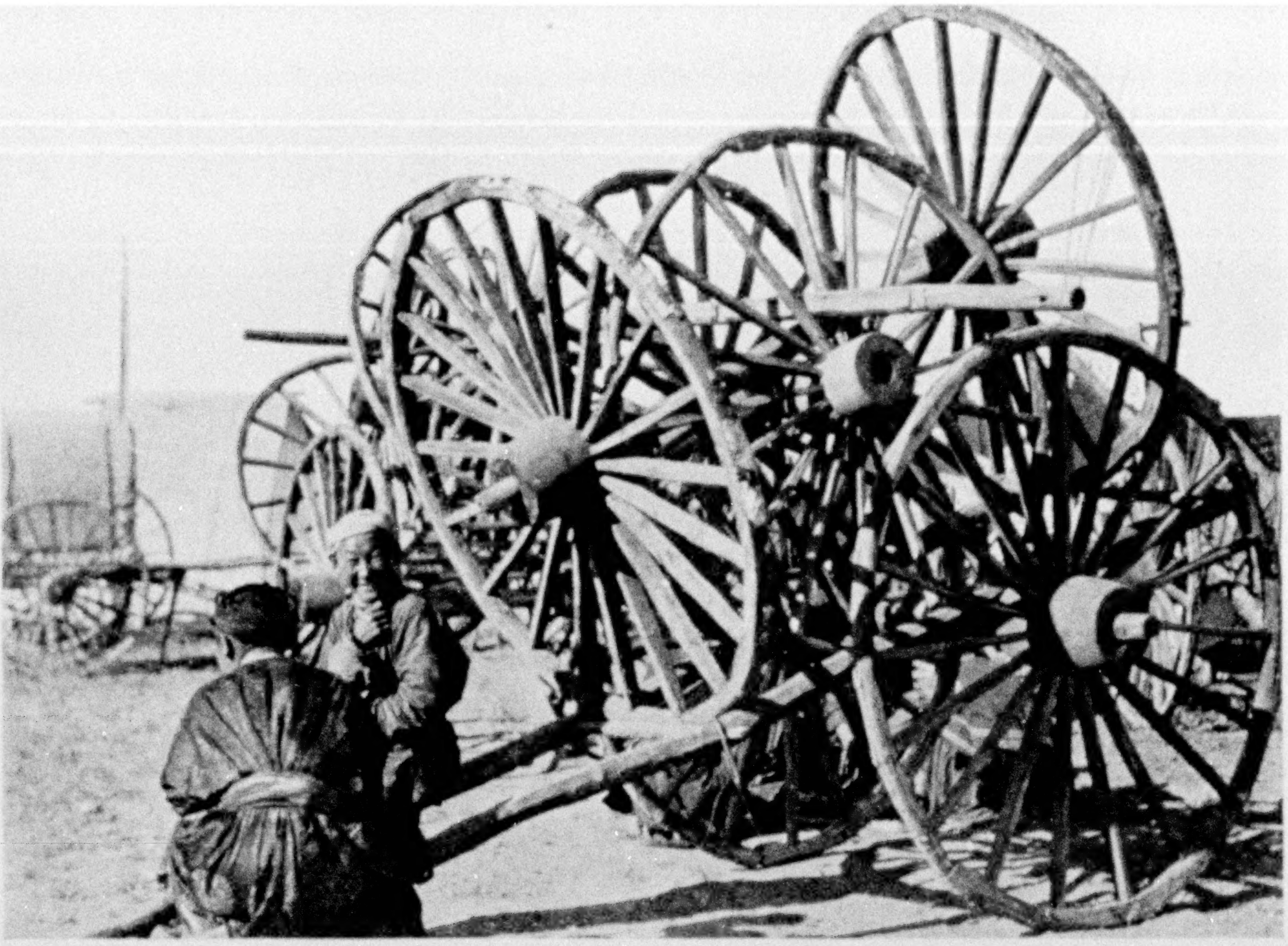
MUKDEN, THE CAPITAL, A CITY IN TRANSITION

Mukden's sharp contrasts are symbols of New Manchuria. Radio words and music echo now against moss-grown tombs, lama towers and pagodas, already old and cracking when all that man knew of electricity was that amber, if rubbed, drew bits of straw to it. Now across old Mukden's public execution ground, where crowds once flocked to see clever swordsmen sever heads at one stroke, there glides the shadow of passing aircraft; and hard by is a new experimental farm station, where the hoe is above the sword. Oil, flour, and woolen mills and a great arsenal hum and rumble where imperial bowmen used to shoot practice arrows at the sky.

There is still old walled Mukden, with its yamens and palaces of Manchu days; but west of it an International Settlement, with foreign consulates; then New Town, or the Japanese railway quarter, with bright lights, motorcycles, and Berlin-like architecture. Only yesterday, it seems, Togo and Kuropatkin were on the front pages of the world's papers, and Manchuria was wild, empty, and far away. In what a short time the power of railroads and colonists have literally pulled the country forward by ten centuries!

AMERICAN INTERESTS IN MANCHURIA

One of my vivid mental pictures of the East is a morning visit to a Chinese Christian mission. The white missionary had let his hair grow to a pigtail and wore Chinese clothes. Standing on a rostrum, he played the air of a familiar hymn on a horn, and the Chinese sang. They sang to our old revival tune, but the words were Chinese!



Photograph by Leonid Dalevitch

"WHEELS WITHIN WHEELS" AT A MANCHURIAN FAIR

Next to cattle-raising, the Mongol's chief business is the transport of goods. For this he uses not only camels, but 300,000 or more two-wheeled carts. But he is no wheelwright; he must buy from Chinese workmen. These rude wheels have no iron tires, but merely flat pieces of metal spiked on where rim pieces join.

Manchuria, like the rest of China, has long come within the scope of America's missionary and educational work and her traditional Open Door Policy.

But as a mere buyer of American goods she ranks low. Canada, our best customer, takes our wares each year at the rate of about $90 worth for every person in that Dominion. To the Manchurian, in comparison, we sell 35 or 40 cents' worth. Most of this is in the form of steel rails, railroad engines and cars, electrical goods, farm implements, motor vehicles, tobacco, and kerosene.

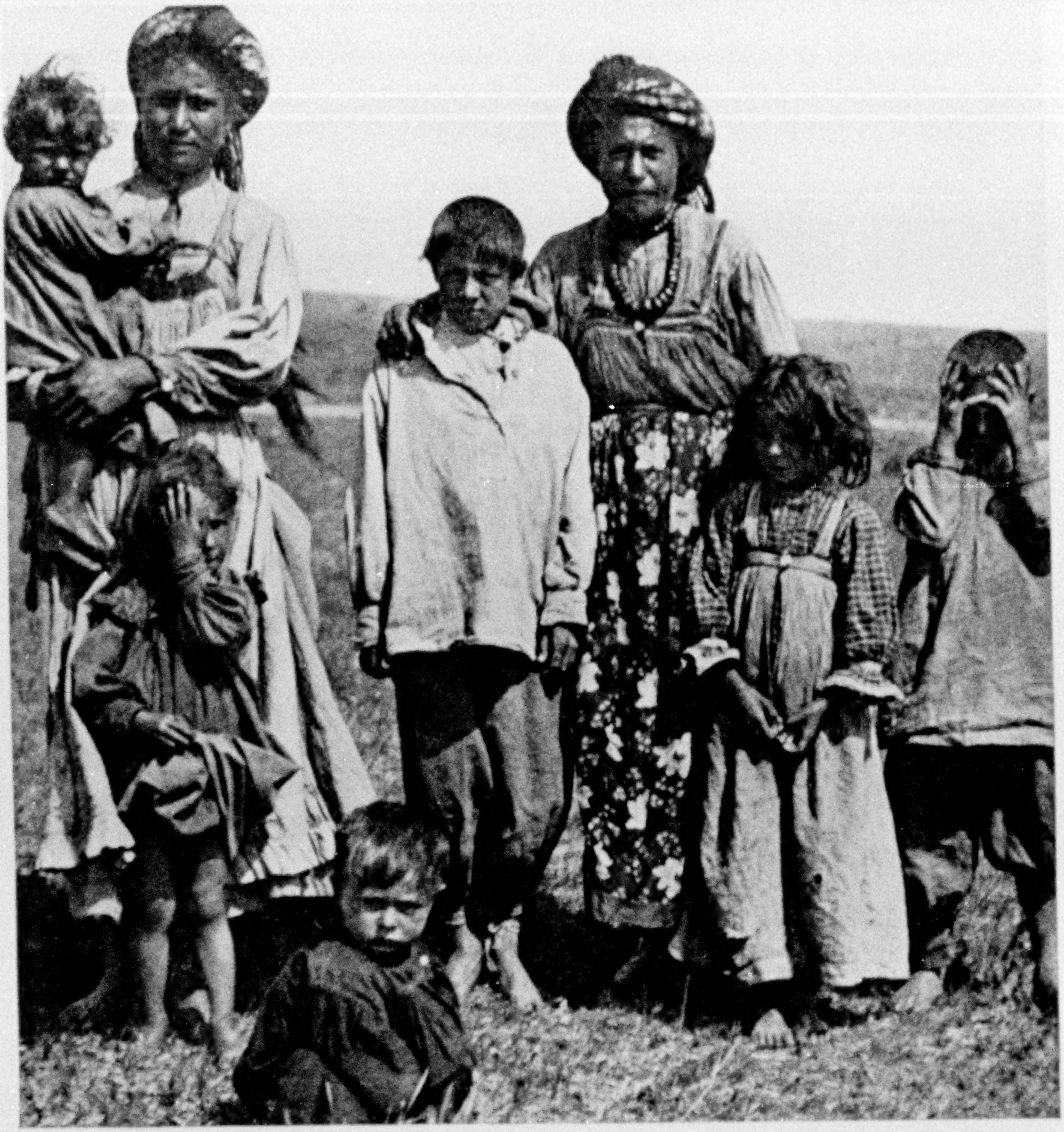
To a singular degree Chinese learn from missionaries the use of bicycles, phonographs, clocks, plows, sewing machines, and many other objects of American manufacture, which some buy by mail, through the aid of the missions.

In value we buy about as much from Manchuria as we sell her; but it is astonishing to learn that chief among our imports from there are dogskins and pig bristles. Other furs, horse tails, soy-bean cake and oil, and wool also are sent us. In China one sometimes sees thousands of horse tails hanging like grapevines on a trellis to air and be sorted.

The black or yellow mongrel dog, or *wonk*, is a well-known character in all North China. Any American who has tried to approach a Chinese farmhouse or walk through a village knows this dog. Some farmers keep from 20 to 30, and even more, of these surly beasts. If you are on a horse, they ignore you; but they are trained to attack immediately any man on foot or any prowler lurking near their master's house. To avoid being bitten, we once had to kill a village wonk. In a jiffy, it seemed, the whole village was after us, with rakes, hoes, and old guns—too old for accuracy, so they missed us!

Thousands of these mongrels are raised in Manchuria for their skins. In parts of Manchuria and Mongolia where the dog-fur business is brisk, when a girl marries she is given a few dogs as a dowry.

These dogs mature in six to eight months.



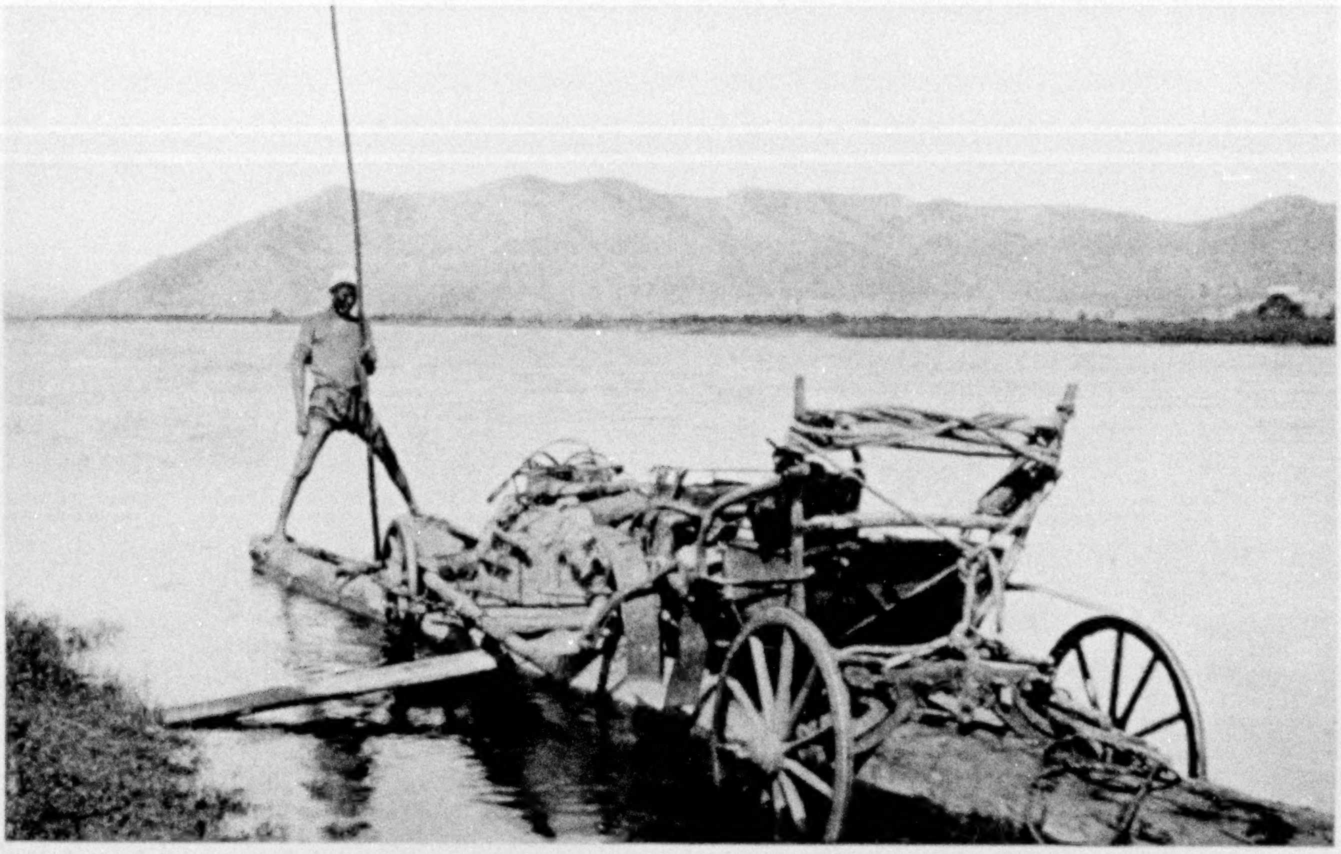
Photograph by Knud Sorensen

THE MYSTERIOUS GYPSIES, WHOSE ORIGIN IS LOST IN ANTIQUITY, HAVE PENETRATED EVEN INTO MONGOLIA

Dressed like Russian peasants, they speak here their own ancient language, a primitive Indo-European tongue, preserved in no manuscript or book and used only by gypsies. Their only contribution to modern civilization has been their gay, passionate music. Liszt ascribes to them the "origin of Hungarian national music." Of wiry figure, with black, silky hair and bright eyes, they first appeared in the Greek islands during the 14th century.

In winter, when their fur is thickest, they are strangled and skinned. Dried and frozen, the skins come in bales to markets like Mukden. Here, before the spring thaw affects them, they are cured, sorted, and made into the "mats" and "robes" of commerce. Of course, dog fur is not sold, when made up by furriers, as "just dog." It often masquerades under the high-sounding names of more fashionable fur-bearing animals; so that milady, marching happily down Fifth Avenue or strolling with the Easter crowd on Atlantic City's Boardwalk, never dreams that somewhere in Manchuria it was poor Fido, and not a skunk, fox, or kolinsky, who died to make her coat or "choker." Kolinsky, kin to weasels, is also known as red sable, Tatar sable, and Siberian mink.

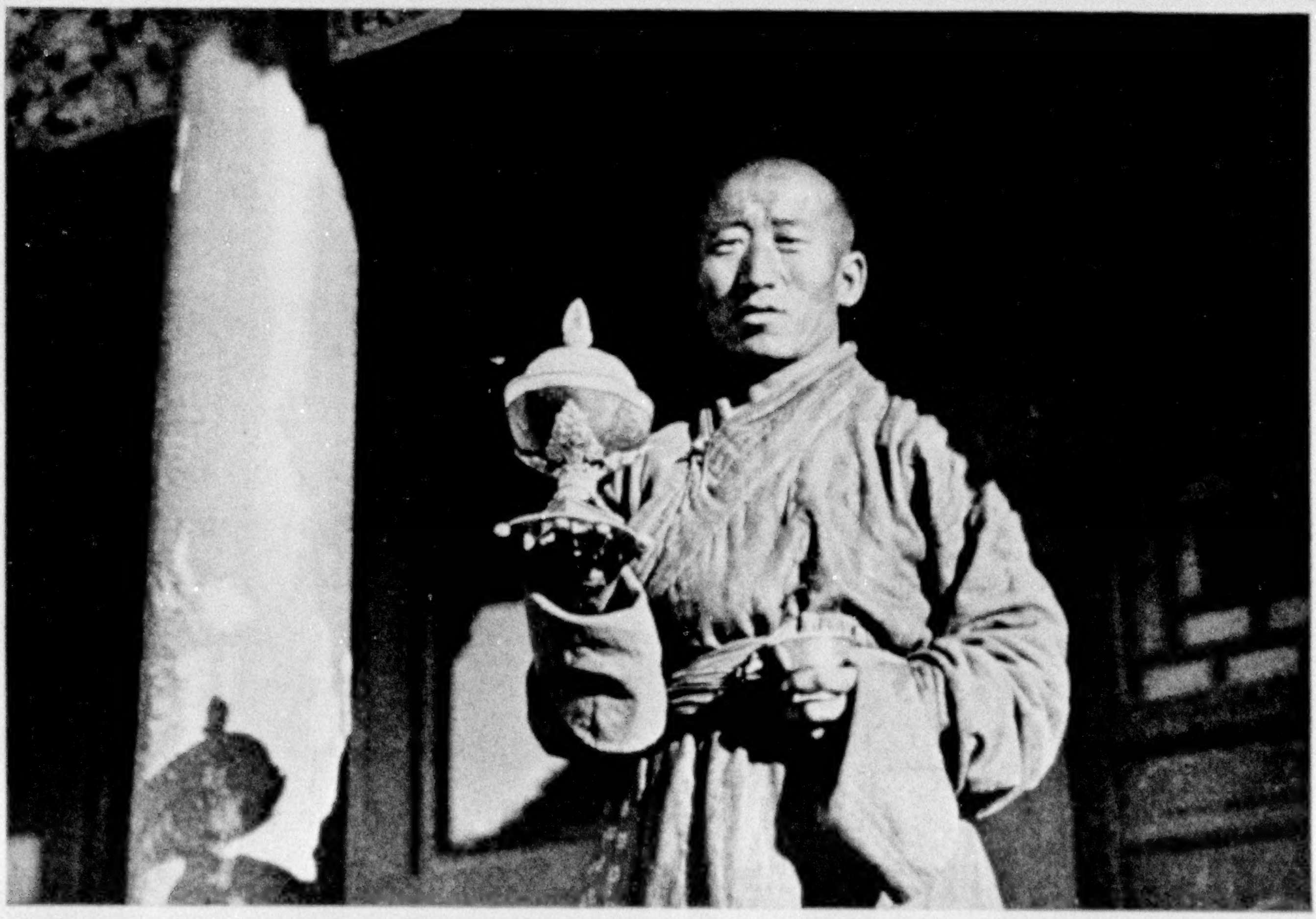
Fox, sable, ermine, squirrel, dog, and



Photograph by R. Harboe

HOLLOW TREE TRUNKS LASHED TOGETHER MAKE THIS FERRY

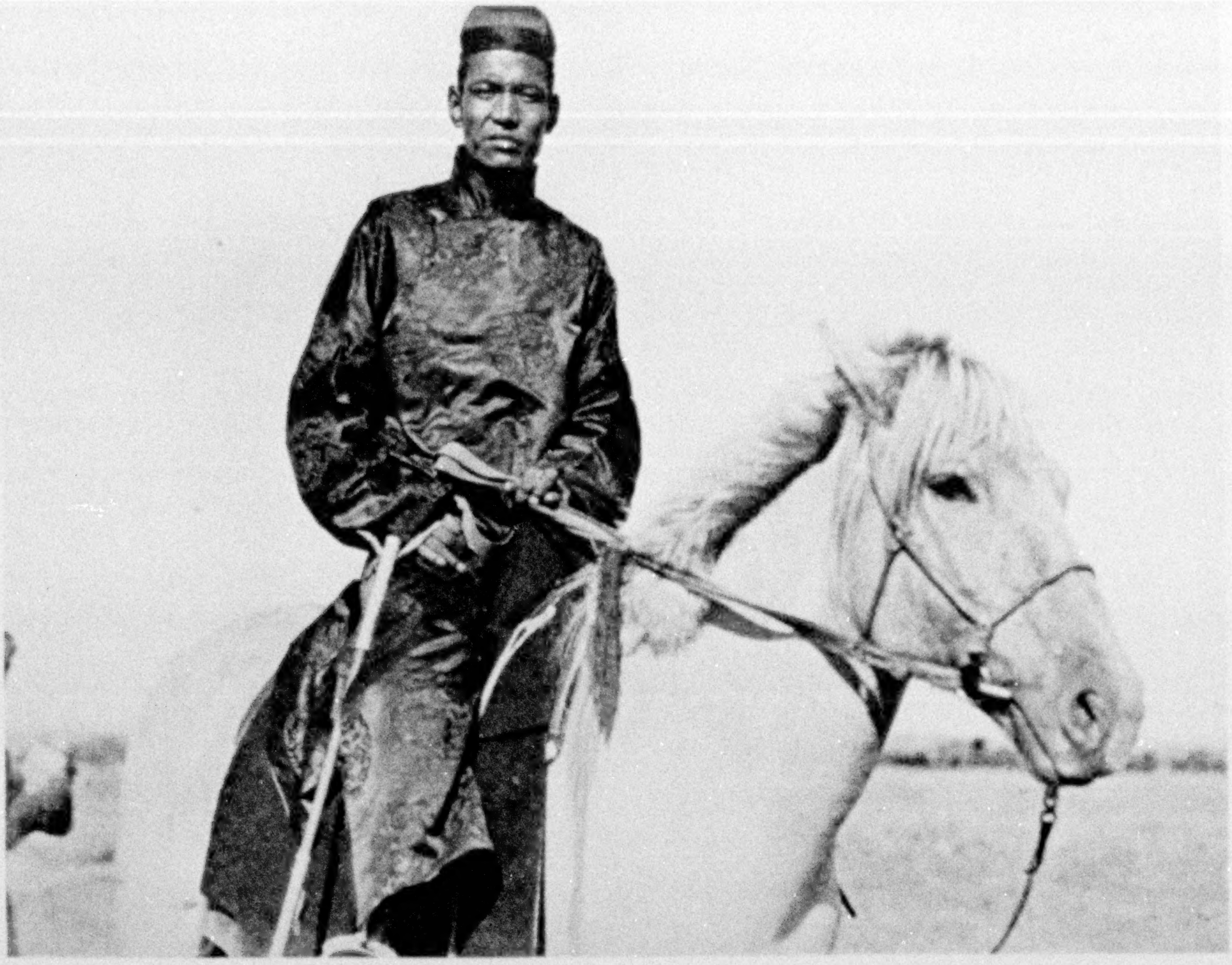
The front wheels and part of the carriage have been detached and placed well away from the rest to insure better balance. The Mongol uses his long pole until he cannot reach the bottom any longer with it, then drifts with the current until he gets near enough to the opposite bank to use his pole again. These primitive types of ferry are common in northern Mongolia.



Photograph by Leonid Dalevitch

EVERY THIRD MAN IN MONGOLIA IS A LAMA

The priests who live in family yurts, as permanent guests of relatives, are of a better class than the monastery priests and are much respected everywhere. This Barga lama holds a holy cup made of a girl's skull and adorned with gold and silver (see, also, page 414).



Photograph by Leonid Dalevitch

MONGOL AND NORTH CHINA PONIES ARE POPULAR ON THE RACE TRACKS OF THE FAR EAST

Mounted on these sturdy, shaggy-haired horses, Mongol hordes roamed from Asia to eastern Europe long ago, conquering as they went. This short-legged beast is famous for its endurance and often for its bad temper. Among Mongols, both men and women are at home in the saddle. A Mongol prince and his mount at a Manchurian fair in the Barga District.

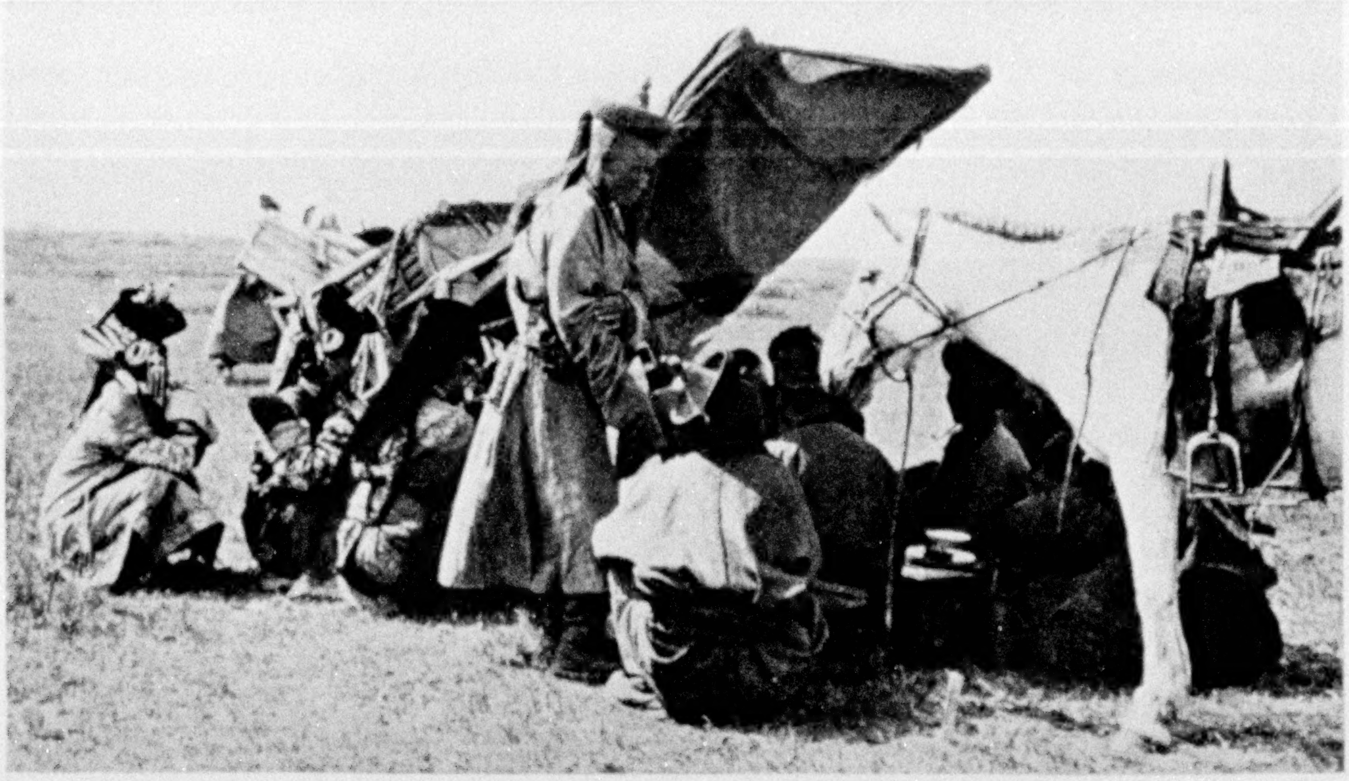
goatskins, horsehides, with now and then a tiger or leopard skin—all these we get from Manchuria. From China, in fact, we import more furs than from any other country; but right here in the United States, though few Americans know it, more fur-bearing animals are caught than anywhere else in the world. While fur is sixth in value among all our imports, we ourselves trap up to $70,000,000 worth a year, mostly in the Mississippi basin. St. Louis, Missouri, is one of the greatest raw-fur collecting centers in the world.

Americans, trying to sell goods in Manchuria, turn up strange facts about the country. Last year Oregon pine easily undersold native lumber along the lower Yalu. This, says an official report, was because of unusual activities of a bandit group known as the "Big Swords." In 1928 only about 2,400 rafts of logs came down the Yalu, instead of the usual 3,000 to 7,000, because of bandit raids. For the same reason only half the bean crop in the bandit region was harvested.

Such bandit organizations, known as Hunghutze, have plagued the land for generations.

Long ago the Manchu régime at Peking used to deport Chinese criminals to Manchuria, and these were probably the ancestors of many modern bands of thieves. Cases are on record of as many as a thousand robbers working in one regiment. Being caught and held for ransom by Hunghutze, or "shaken down" for cash payments by other kinds of bandits, is a common experience of rich Chinese. The rich expect such treatment every now and then; it is a sort of tribute or confirmation of their standing in the community.

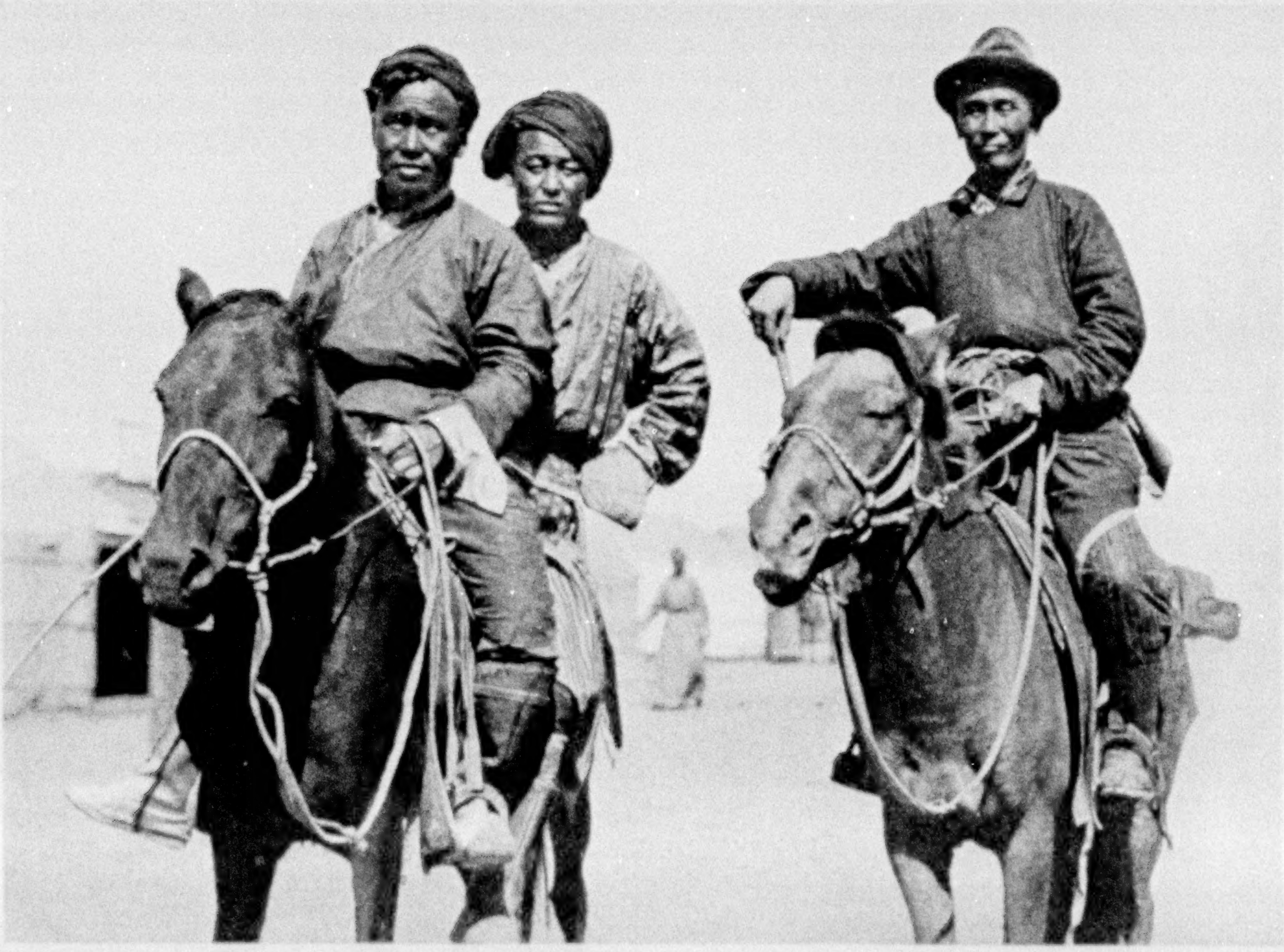
In the nineties, when Japan invaded Manchuria in her war with China, a pro-



Photograph by Knud Sorensen

POTLUCK À LA MONGOL

A friend has just ridden up on his white horse to join the *al fresco* meal of this Mongolian family on the move. Like some tribes of American Indians, whom they resemble, the Mongols cannot endure a settled life. All their belongings pack easily on the back of a camel; the few calfskin bags with provisions, the tent, the cooking pots, the grate, two water buckets, and a few odd pieces of felt are all that they enjoy—these and space to journey through.



Photograph by Leonid Dalevitch

THE CAMEL MAY BE USEFUL, BUT THE MONGOL PREFERS THE PONY

The native breed is seldom more than 13 hands high, but for endurance and cleverness the Mongol pony has few rivals. In the depth of winter his owner neither feeds him nor provides him with shelter. For food the pony scrapes away the snow to find the remains of the summer grass underneath, and for protection against the bitter cold he grows an extra suit of hair.

XUM

Photograph by Knud Sorensen

ONCE IRKUTSK TRADED HEAVILY WITH MANCHURIA

Leading, as it does, from Russia across Siberia and over Manchuria, the long Europe-to-Asia railway system in normal times would transport enormous through freights; but since the U. S. S. R. placed all export trade under official control, such traffic has dwindled. Many furs are smuggled from Siberia into Manchuria, but eastbound through cargo on the railway is very light. An ever-increasing volume of goods, however, imported via Vladivostok, reaches Manchuria over the east end of the line. A market stall in Irkutsk.

vincial governor offered a bonus to certain robber bands, it is told, if they would take the field and turn back the armies of Nippon! The bandits, probably mindful of the good will and cumulative experience at stake in their own business, declined to become mercenaries!

Swift as the wave of modernism is, one sees it most, of course, in cities. At Mukden, for example, is a new American bank building typical of Yankee bank architecture. More than 7,800 new buildings were erected last year, using much American hardware and plumbing and including a dozen or more large structures of steel and concrete (see pages 396, 413).

As the American bookkeeper has his calculating machines, so the Chinese clerk employs his abacus. One hears the click-click of its little round wood balls in every bank and in the back of every big store. Russians use it, too; and often an American or British accountant, caught away from his adding machine, calls in a native with his "pagan" counting apparatus to verify a sum.

Through Vladivostok and up to the Chinese Eastern comes an ever-growing stream of imports, with American footwear, haberdashery, cotton goods, fancy belts, wrist watches, and fountain pens; and in Harbin, too, every aspect of modern life, from radio to Russian grand opera, but always the contrasts! A consular report solemnly says: "Recent construction work sees the completion of a broadcasting station and the beginning of a temple to Confucius"!

Farm tractors are popular, especially in regions where horseflies are bad. But they are still very rare. It is the millions of shaggy ponies and the ubiquitous mules which do the work.

Of all familiar farm scenes in Manchuria, the shoeing of the family mule

Photograph by International

THE MUSICIANS PAUSE FOR BREATH

These Mongolian lamas in grotesque headgear are playing at a Buddhist celebration. Most of the festival is devoted to the Dance of the Gods, which takes place in front of the temple and ends with the famous Tibetan devil god dance (see, also, "Life Among the Lamas of Choni," by Joseph F. Rock, in the NATIONAL GEOGRAPHIC MAGAZINE for November, 1928).

is the most ludicrous. A kind of gallows is rigged and the mule trussed up to prevent kicking. Even in that apparently helpless fix I have seen them reach around and sink their teeth into a jabbering native's padded clothing.

Through mud, dust, and heat, or over the hard frozen ground of winter, these mules drag the heavy carts and often stand out all night in a temperature far below zero. Usually, the Chinese takes fairly good care of his mule. But even when cudgeled the mule seems not to mind it. He will nose about for stray bits of grass even while getting roughly beaten and soundly abused in choice Chinese vituperation.

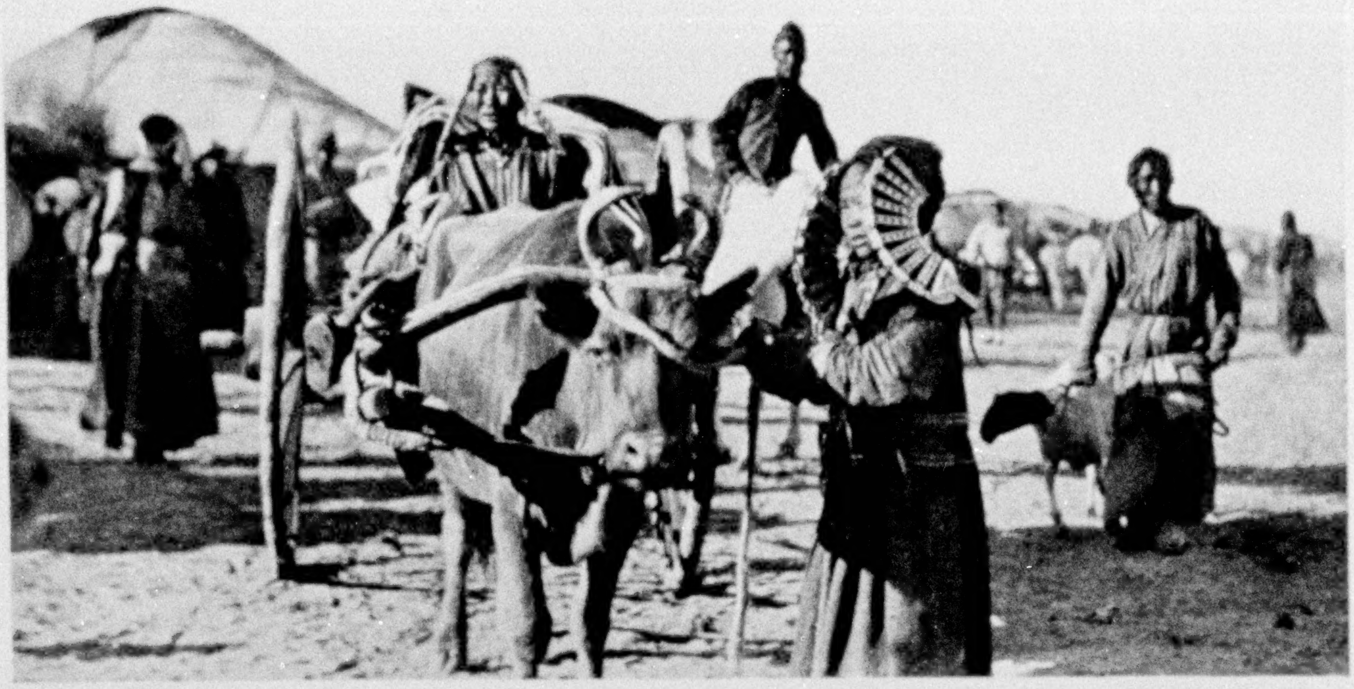
In and around Harbin more than 1,000 motor busses are seen; a few Manchurian hotels advertise roof gardens and grills. Motion pictures are shown, with a Russian and Chinese translation of titles on a small side screen. Yet, away from foreignized life in railway zones and cities, Chinese farmers still use only the implements of their ancestors. A stone "stove," fired from outside the house, heats it by day and serves as a bed by night. Covered only with sheepskins, it is hard but warm. I know. I spent nights on one when the temperature was 40 below and the Liao was frozen over. I didn't sleep much—for reasons any imaginative entomologist will understand.

NOT ALL OF MANCHURIA IS MODERNIZED

Settling hundreds of thousands of poor immigrants on raw lands, where they usually start life with not even work animals, seed, or implements, is the grave responsibility that Manchurian authorities must face.

On paper, this unparalleled migration that is rapidly making Manchuria such a busy place affords romantic and popular reading in this age of industrial miracles. But the picture does not show the whole stage nor all the actors on it.

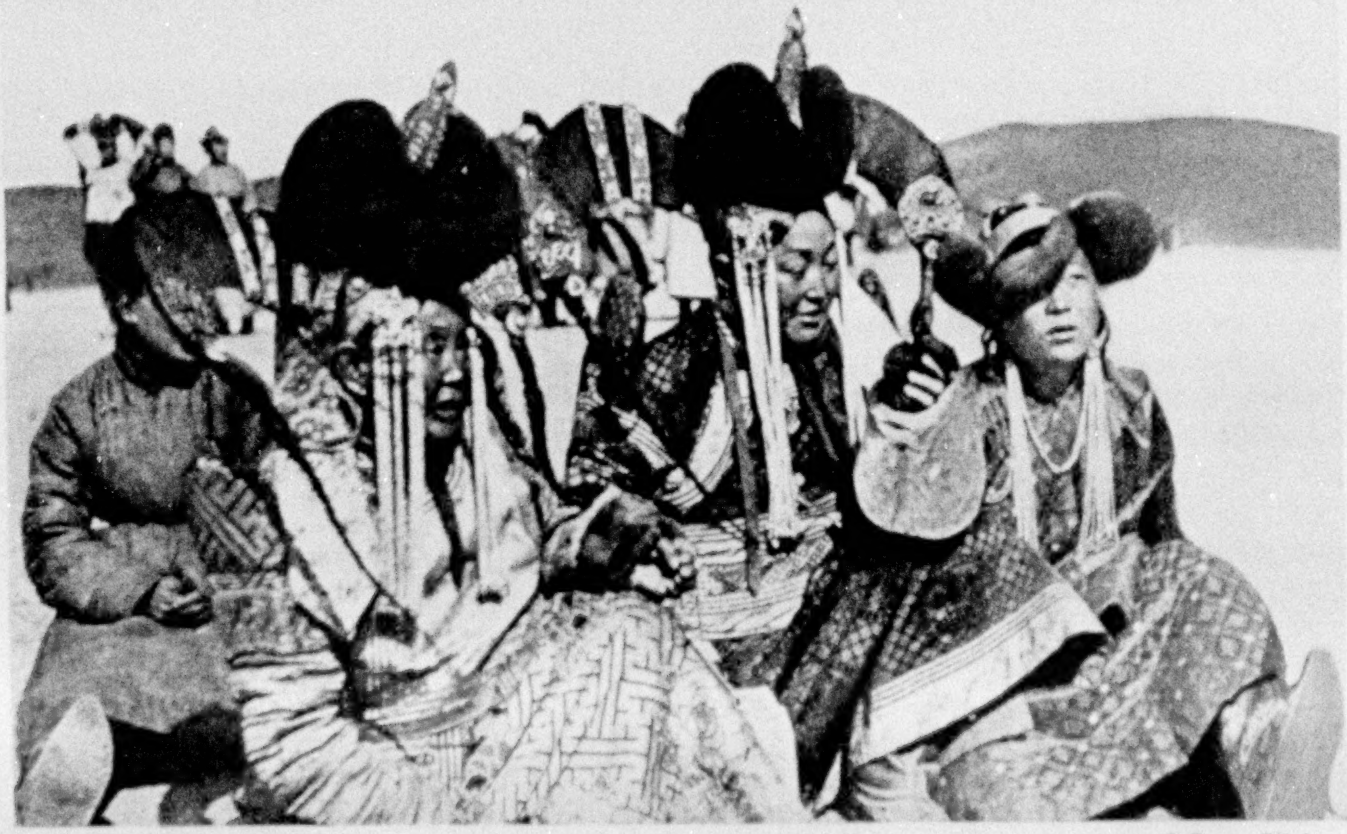
Outside the railway zones and away from cities, roads are still mere tracks on



Photograph by Leonid Dalevitch

MONGOL WOMEN COME TO HUNT BARGAINS AT A MANCHURIAN FAIR

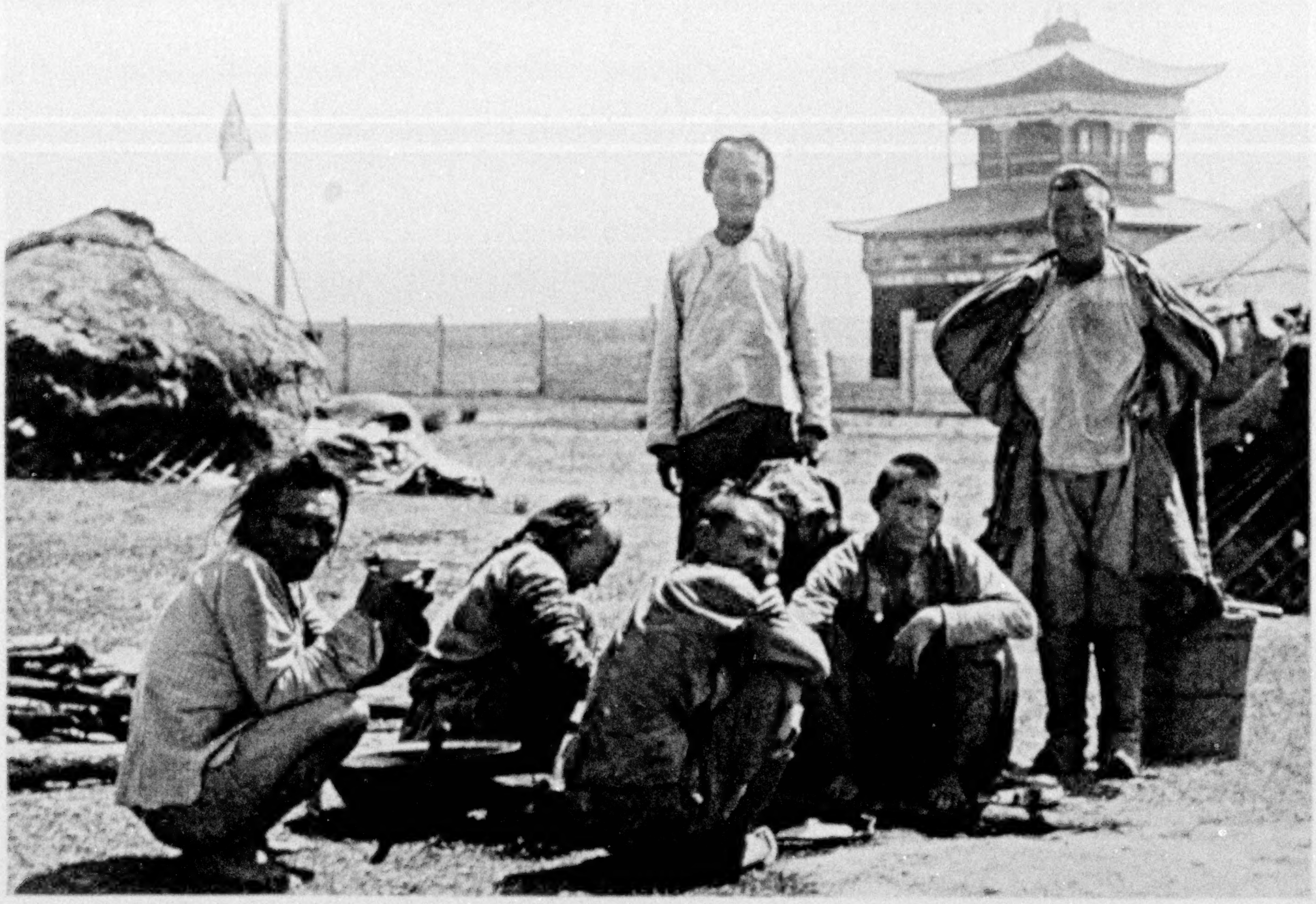
Their overelaborate, clumsy headdress seems oddly out of place for women who must live in primitive yurts and ride in crude oxcarts; but the feminine quest for adornment seems universal. At this nomad-Chinese fair in the Barga border region as many as 10,000 tents are often set up.



© Press-Cliche

BELLES OF THE STEPPES

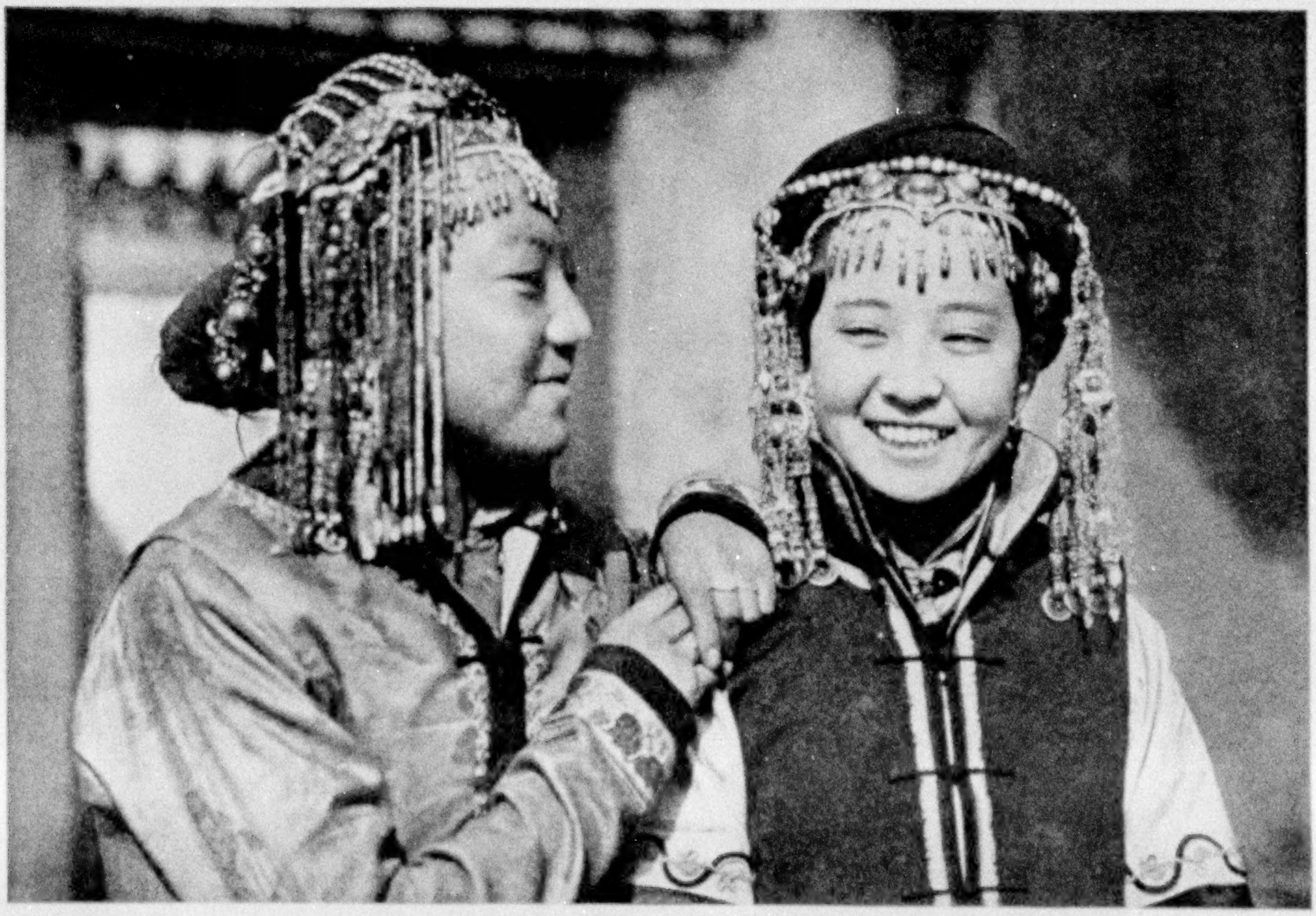
Their hair is arranged in great crescents and adorned with silver pins, buckles, rings, coins, and curtains of red coral, turquoise, and pearl. Plain workaday clothes have been discarded for gowns of expensive silks.



Photograph by Knud Sorensen

MESS CALL ON THE STEPPES OF THE MONGOLIA-MANCHURIA BORDER

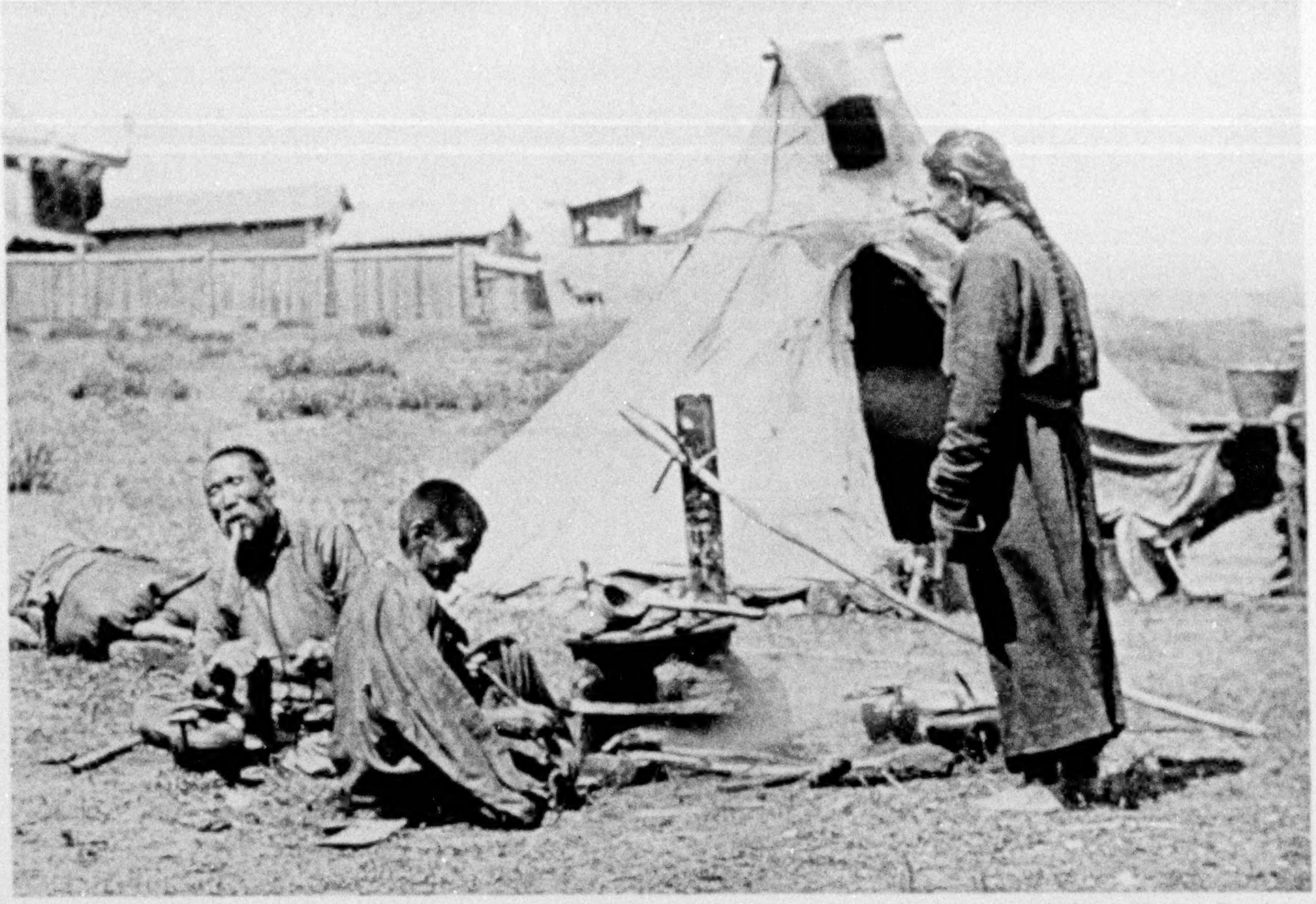
Mutton boiled with a kind of millet, washed down with quantities of tea or milk, is the favorite dish of these Mongolian soldiers. To the left and right are two yurts (felt tents) and in the background is a temple.



Photograph by J. T. McGarvey

MONGOLIAN WOMEN WEAR THEIR WEALTH ON THEIR HAIR

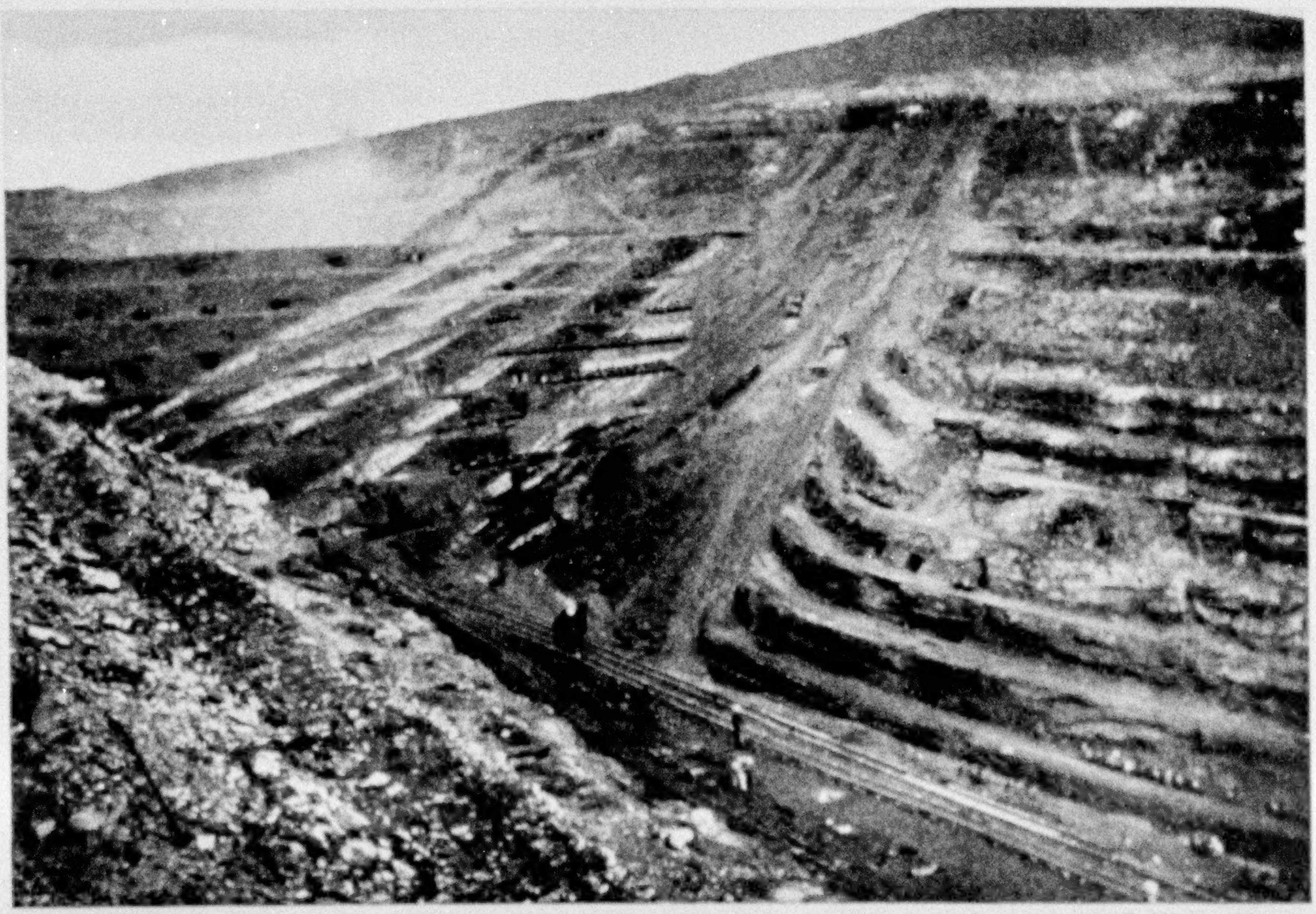
The precise nature and shape of the adornment varies with the tribes, but even a poor girl, once she marries, somehow manages to obtain a profusion of silver ornaments to wear on her head.



Photograph from Horace Brodzky

THESE BURIATS MIX BUSINESS WITH PLEASURE AT URGA

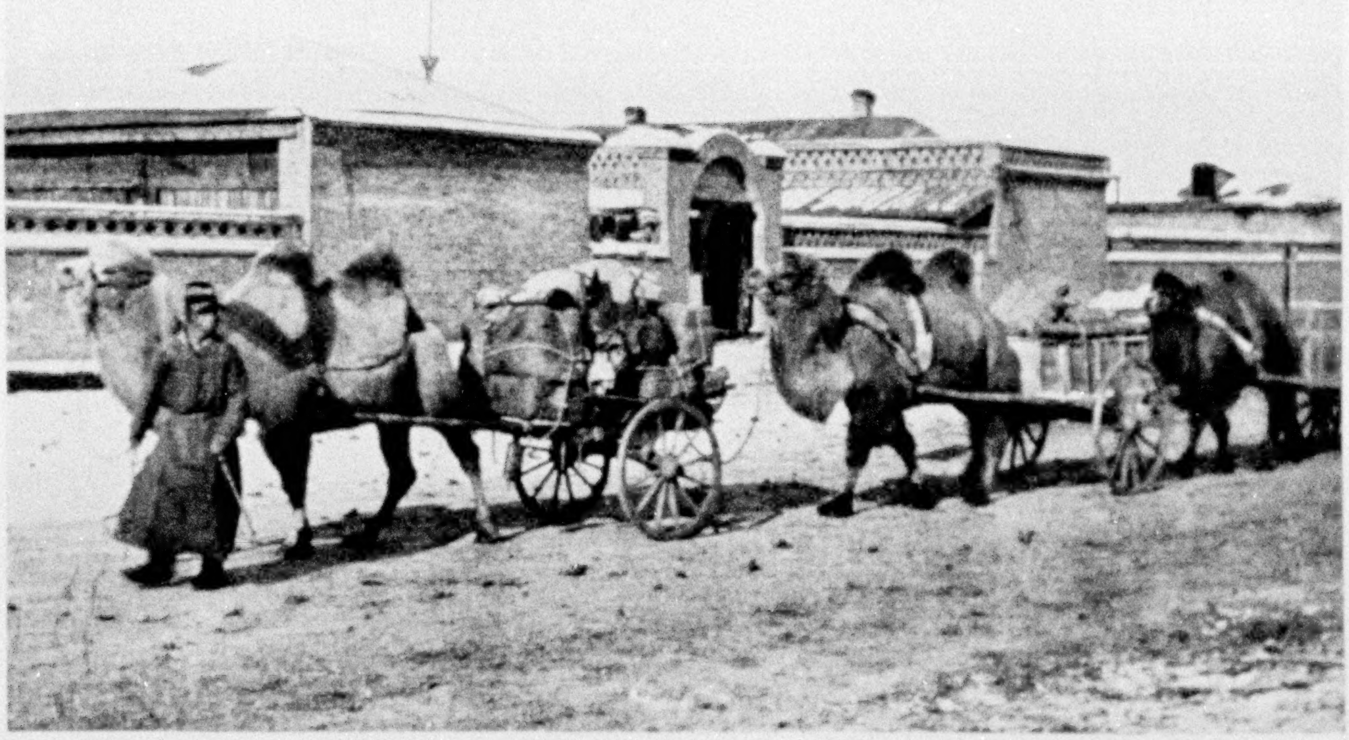
They are just in from Peiping (Peking) with their camels and merchandise, and have pitched their tent at Mai-Mai-Chen, the Chinese business quarter of Urga, the Mongolian capital. Practically all of Mongolia is commercially tributary to this city.



Photograph by C. Walter Young

FUSHUN OPEN-PIT MINES SUGGEST THE BROWN COAL FIELDS OF NORTH GERMANY

The coal vein in this Manchurian field reaches the amazing thickness of from 80 to 420 feet. Though long known to exist, development on a modern scale began only within recent years. Now Manchuria's economic position is greatly strengthened by this vast coal supply (page 412).



Photograph by Eugene Lee Stewart

AN OVERLAND LIMITED OF THE DESERT

Loaded with blankets, clothing, tobacco, and other commodities, a Russian caravan is leaving Hailar, a horse and cattle center in northwestern Manchuria, for its long trip across the Mongolian border to Urga, a distance of almost 600 miles as the crow flies.

the ground. Except when frozen over, they are impassable for motor vehicles. So the squeaking, clumsy cart and myriad small sailboats on the streams still move most goods and people. Among many peasant farmers a vague, superstitious fear lurks that it is some unseen force of evil that propels the horseless plow, and they will not even approach it. This same fear, in the early days of railroad-building, led North China fanatics to attack a construction train, dig a hole beside the track, dump the engine into it, and thus bury alive the hissing fire monster!

At present less than half of the arable land of Manchuria is plowed. Economists estimate that it may some day support a population of 100,000,000. Besides the vast extent still available to new settlers, wide areas are forested hills and wild, rough regions, where only hunters, loggers, and robbers venture.

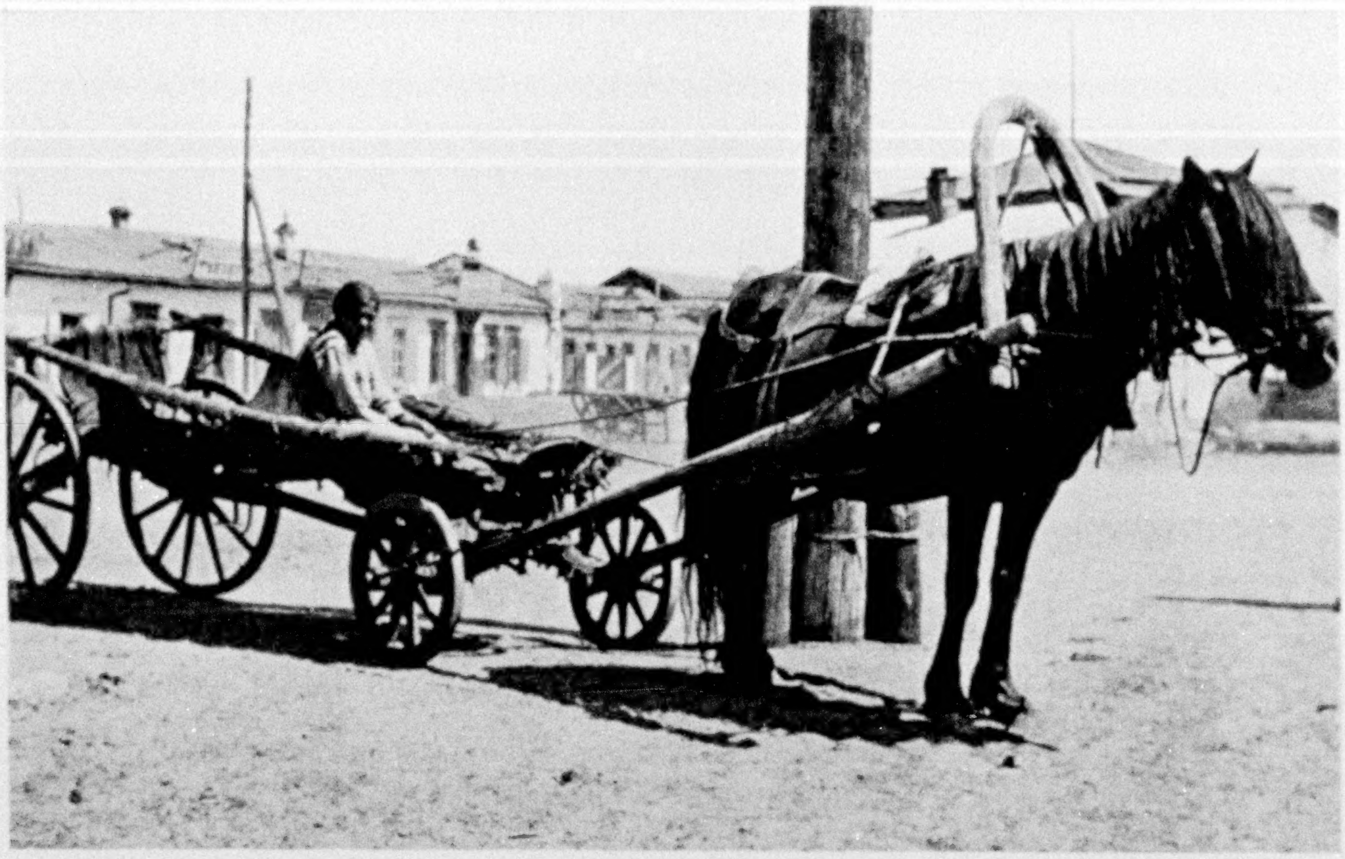
All Manchuria was primarily a forest-meadow country. Once the big woods stretched over valley and mountain, as in Alaska and British Columbia. Trees covered the Yalu Valley almost to its mouth; they grew over much of the Ussuri Valley, over the Sungari basin, along the Amur, and of course they shaded the slopes of the two Khingan Mountain ranges. But many forests have been wiped out by settlers and lumbermen.

Mukden Province is almost all under cultivation, but wooded areas still abound in Kirin and Heilungkiang provinces.

WILD LIFE ABOUNDS IN MANCHURIA

With its trees, meadows, and streams, its fur-bearing animals and climate, Manchuria is much like that part of Siberia which is cut off from China by the howling wastes of Gobi and Mongolia.

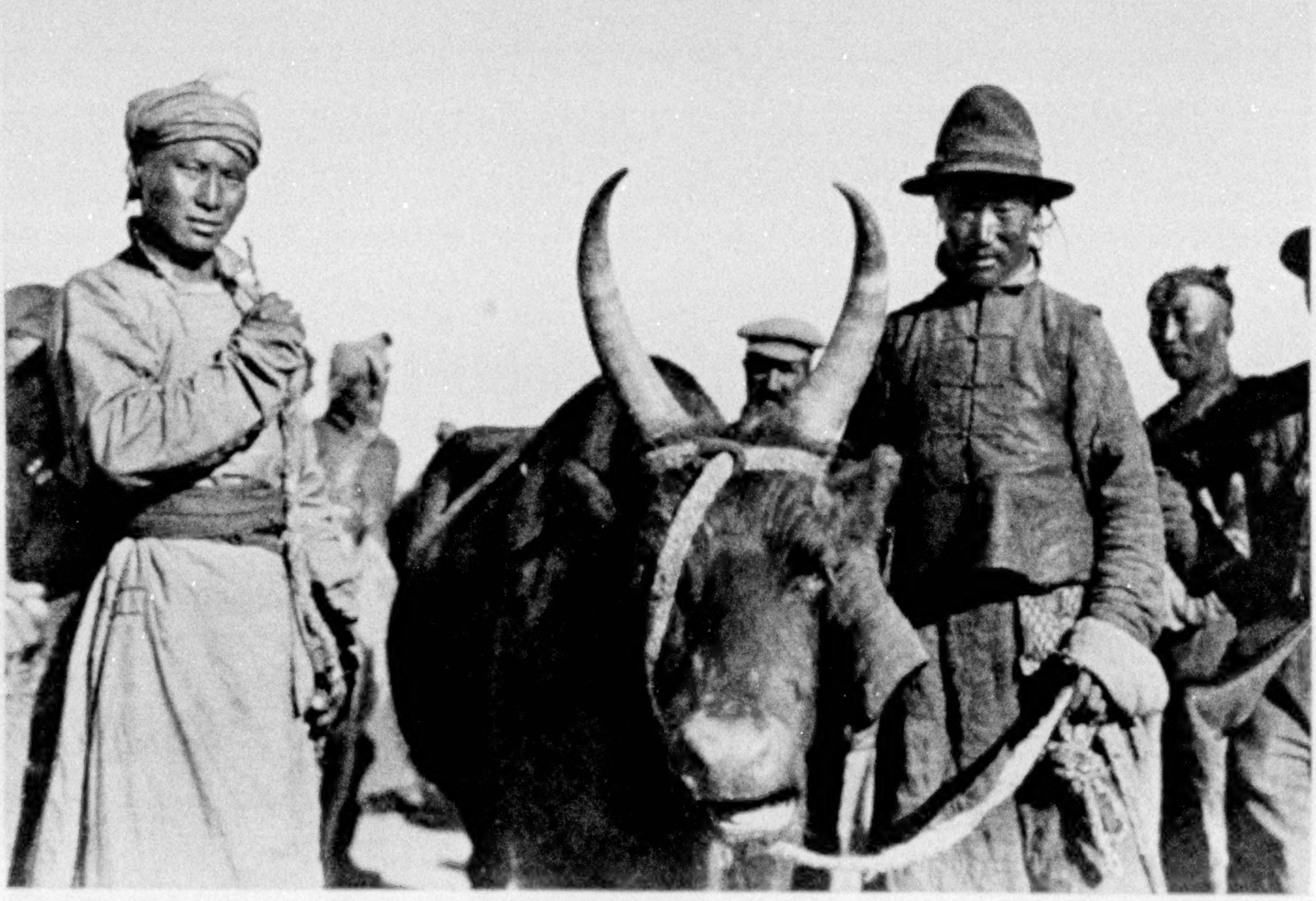
Its wild animals are linked to those of China by a mingling of species; but many are similar to those of east Siberia and, through them, akin to the fauna of northwest America. Some naturalists believe that camels went from America to Asia by the old land bridge that crossed what is now Bering Sea, and that certain bears came to America from Europe by that path. That the North American Indians, originating in or about the Mongol coun-



Photograph by Eugene Lee Stewart

A DAUGHTER OF THE BORDER

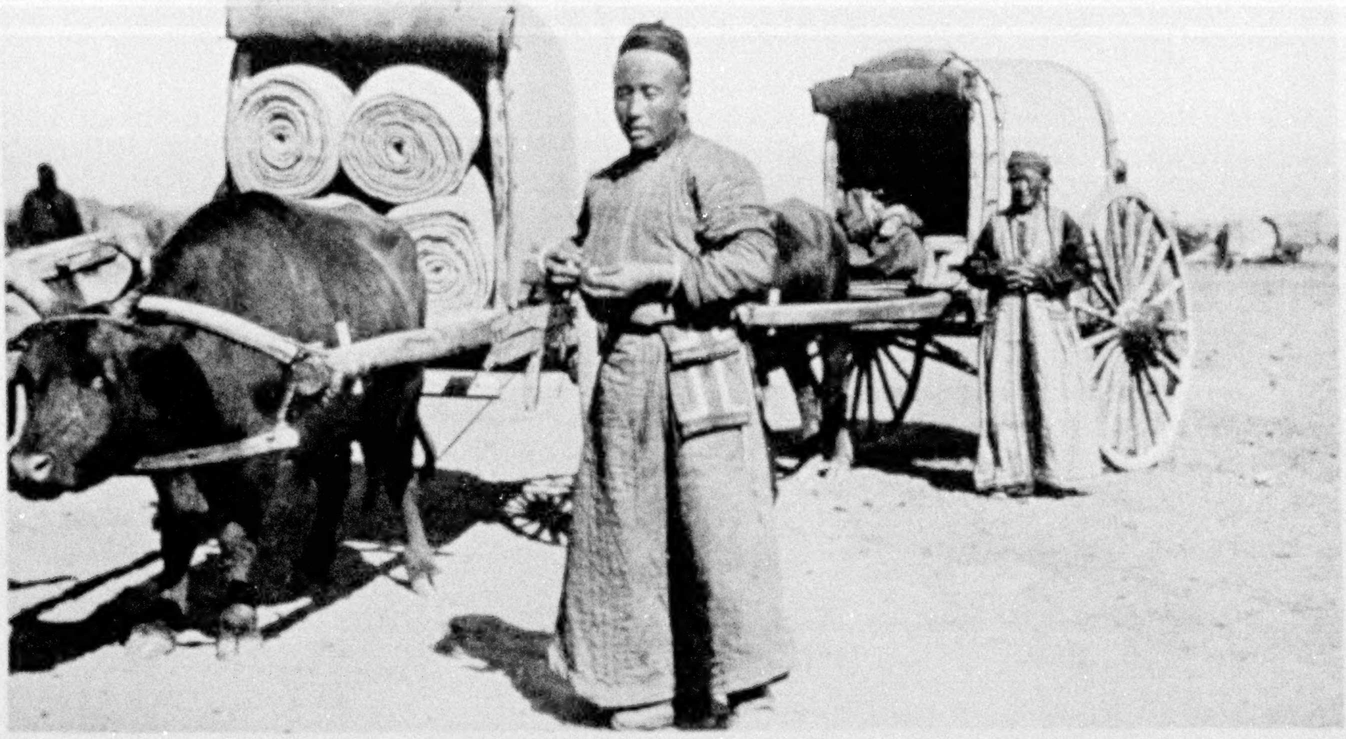
This Russian girl, who drives a peasant wagon, lives in Hailar, near where the boundaries of Siberia, Mongolia, and Manchuria meet (see map, page 384).



Photograph by Leonid Dalevitch

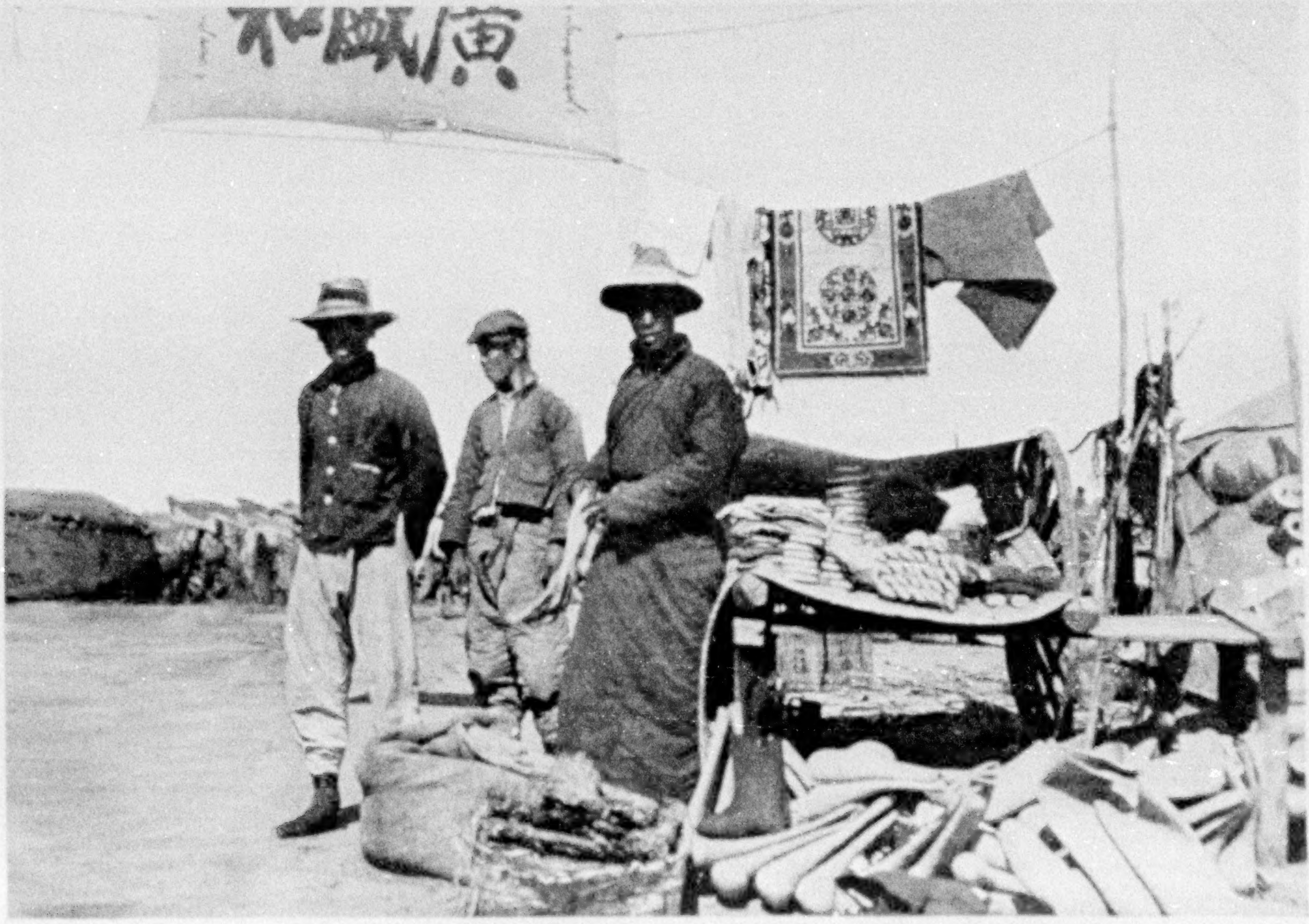
THE PASTORAL AGE LINGERS ON THE MANCHURIA-MONGOLIA BORDER

To many nomads, milk is the chief reason for raising cattle; beef is regarded as a by-product. But oxen draw the lumbering carts and furnish Russia, China, and other countries with meat and hides. In summer the owners pasture the animals near water; in winter they seek places on which the snow lies fairly thin, so that the cattle can get at the grass underneath.



OFF WITH A LOAD OF THE EVER-USEFUL FELT

Some of this heavy material, which he bought at the Barga District fair, will be used as a covering for the nomad yurt and cart, and some as rugs.



Photographs by Leonid Dalevitch

PIONEERING CHINESE TRADERS TRAFFIC WITH THE BORDER MONGOLS

A Chinese has opened up his trading tent at the Barga fair with a stock of goods, ranging from rugs to felt boots, to catch the nomad eye. Though the Mongol likes the cheap goods of the Chinese traders, he fears their countrymen as colonizers and notes with alarm how tilled fields are already encroaching on the steppe, which till now has been his undisputed domain.

XUM

tries, came to our shores by this same route is, of course, a familiar theory.

Of all Manchurian animals the great woolly tiger is king. One sees his skin now and then, brought frozen to Mukden and Newchwang. His coat commands a high price, and skins measuring 12 feet and even more in length have been marketed. But it is not his skin alone which has led to his becoming almost extinct, except in the remote forest areas of the Khingans, and other mountains, and the thinly settled areas along the Amur and Ussuri. Chinese believe the bones, heart, and blood of the tiger have medicinal properties of great power. Cure-alls brewed from his kneecaps and claws fetch a high price.

Up to a few years ago, these giant tigers were plentiful in Manchurian forests. When the western part of the Chinese Eastern Railway was being built, so many workmen were killed by them that it is recorded a regiment of Cossacks was employed as guards. The animal was even known to enter the huts of Chinese and Russian settlers and carry off the inmates.

Besides its tens of thousands of domestic dogs, Manchuria also knows a wild dog, or *tsai-kou* (wolf dog), as the natives call it. It hunts in packs, killing deer and wild pigs. Though Chinese hunters welcome no encounter with a hungry pack when the ground is covered with snow, they often slay these animals and probably many of their skins find their way to American markets.

North of Shanhaikwan we hunted bustards, and along the Liao, when flood water lay on the fields, we saw wildfowl in countless thousands. They swarmed till the sky was fairly blackened, as now and then we see migrating blackbirds moving cross Middle Western fields in great dark rising and falling waves.

Where settlers have colonized thickest, as in Mukden Province, the once numerous pheasants and partridges are much diminished, although the export of game birds still goes on. In one winter, from Changchun 800,000 pheasants were shipped, and I once saw them selling in the native markets for the equivalent of five cents each.

Yet slowly, inevitably, wild life yields; farmers oust the hunter and trapper.

Earlier dwellers play no part in the story of modern Manchuria. As the tide of immigrant farmers rises, it pushes the nomad people of the tents more and more back into Mongolia. Manchus tend to amalgamate with Chinese. By their dress one may still tell the women of the two races apart, but few foreigners can distinguish a Manchu man from a China man.

The new order affects the primitive Tatar tribes, just as white migration to our West affected the Indians. They tend to disappear. As Indians went with the buffalo, so the Tatar is vanishing with the sable, once his favorite quarry, and with the tiger, leopard, bear, and the much-sought wapiti and sika deer, whose green horns were good medicine.

The Tatars' end is sad, as is the end of every dwindling native race which fails to adapt its ways of life to those of the invader. Along the Amur and Sungari, remnants of the old tribes still hunt and fish.

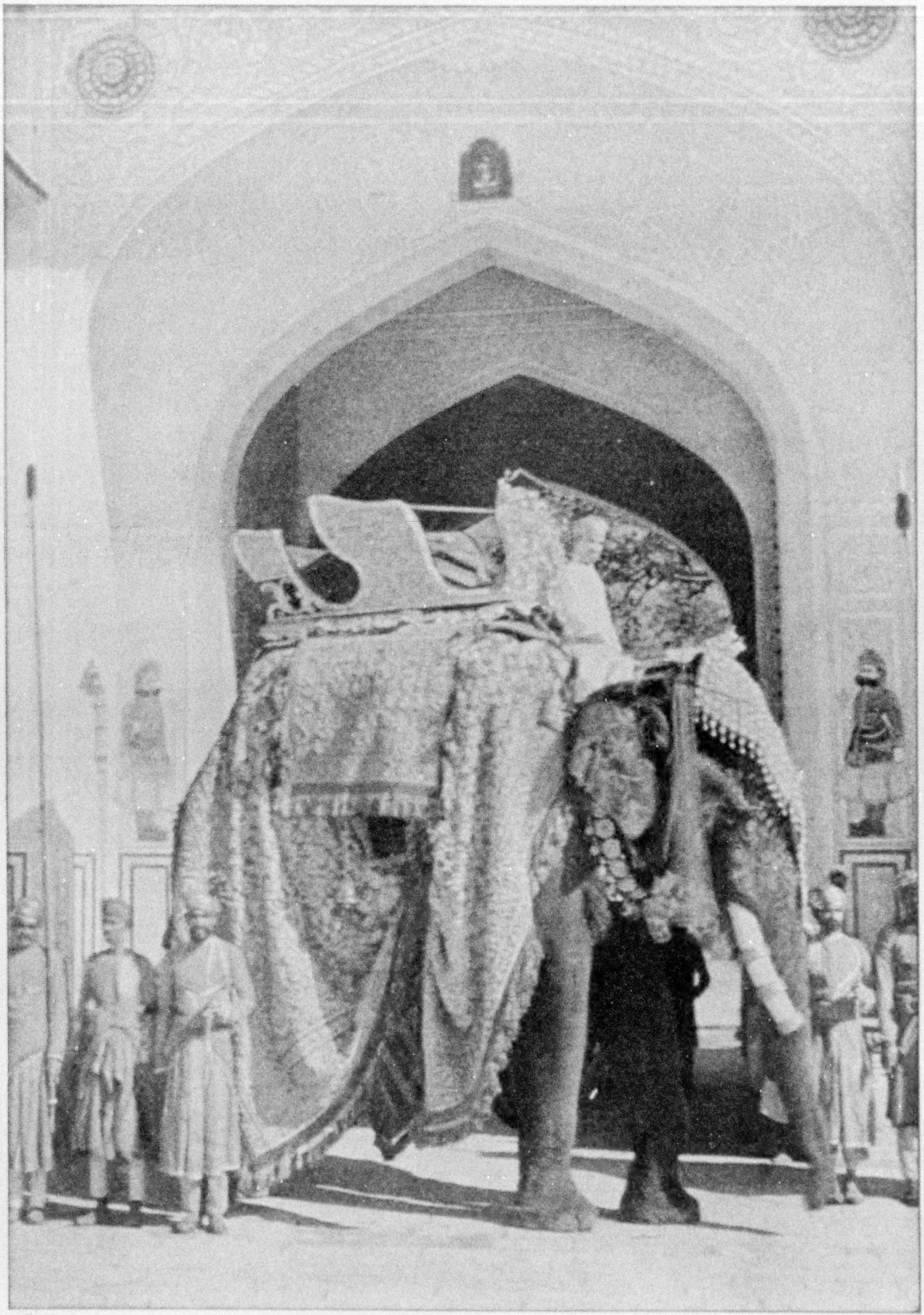
As late as the middle of the 19th century it was unsafe for whites, and even Chinese, to venture near the Tatar hunting grounds. But now their power is past. They are no more active in Manchurian affairs than Apaches in the trade, social, and political life of Arizona.

To-day, as a haven for Asia's surplus population, Manchuria is preëminently the home of Chinese; yet, because of its important map spot, where China, Russia, and Japan rub elbows, it is predestined to be one of those areas where tangled knots of conflicting interests make international problems.

That is why, year in and out, cables from the East carry news of Manchuria.

It is because the map of the world is shaped as it is; because the Bear wants a path to salt water; because the Dragon wants homes for surplus farmers; and because Japan wants a peaceful, prospering Manchuria *in statu quo*.

How to live and work, how to find a *modus vivendi* that is without detriment to any of those chiefly concerned—that is the problem in commercial and political geography that makes history now in Manchuria, where something is always happening.



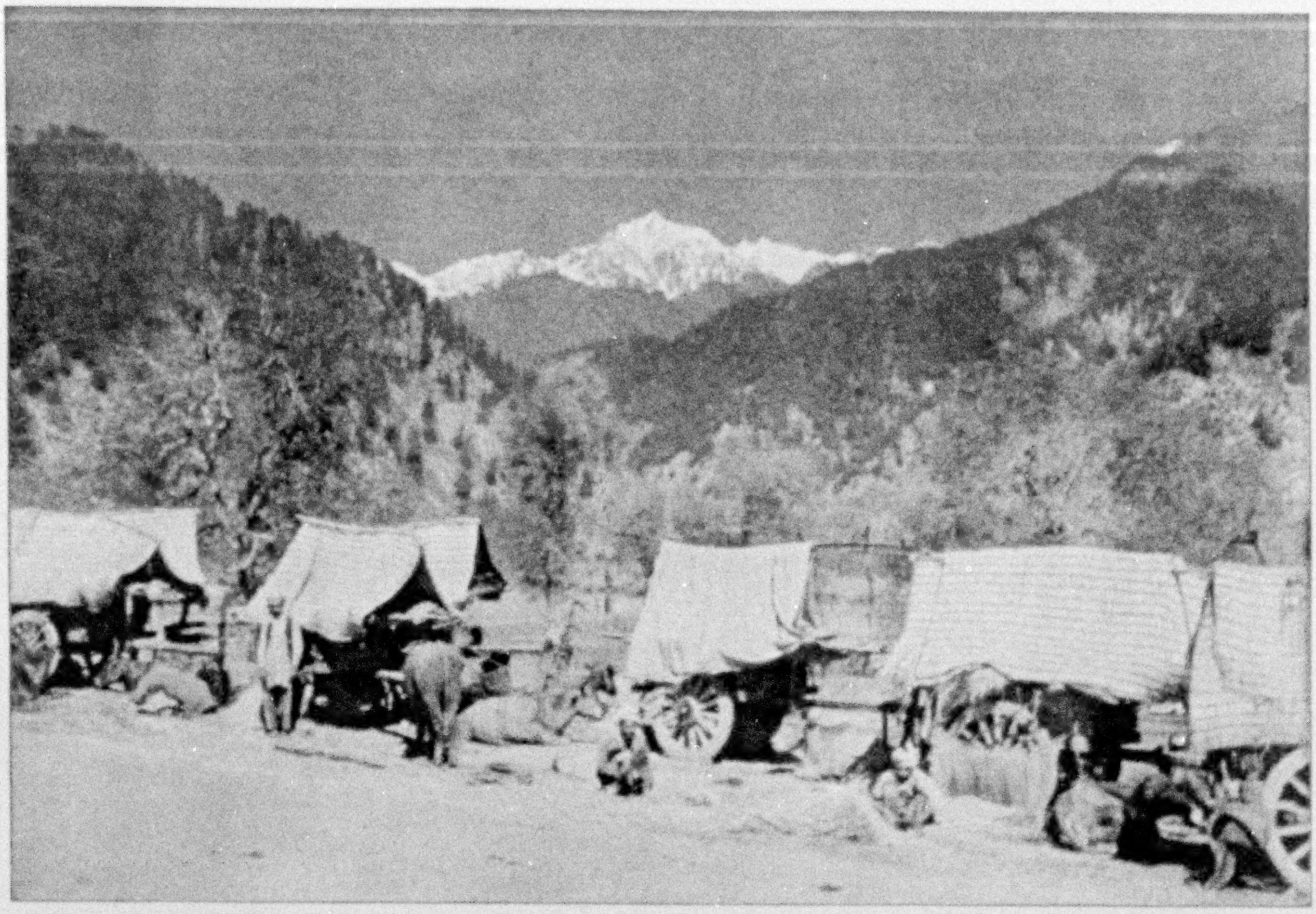
© National Geographic Society

Natural-Color Photograph by Franklin Price Knott

"OUR LORD THE ELEPHANT," PANOPLIED FOR ROYALTY

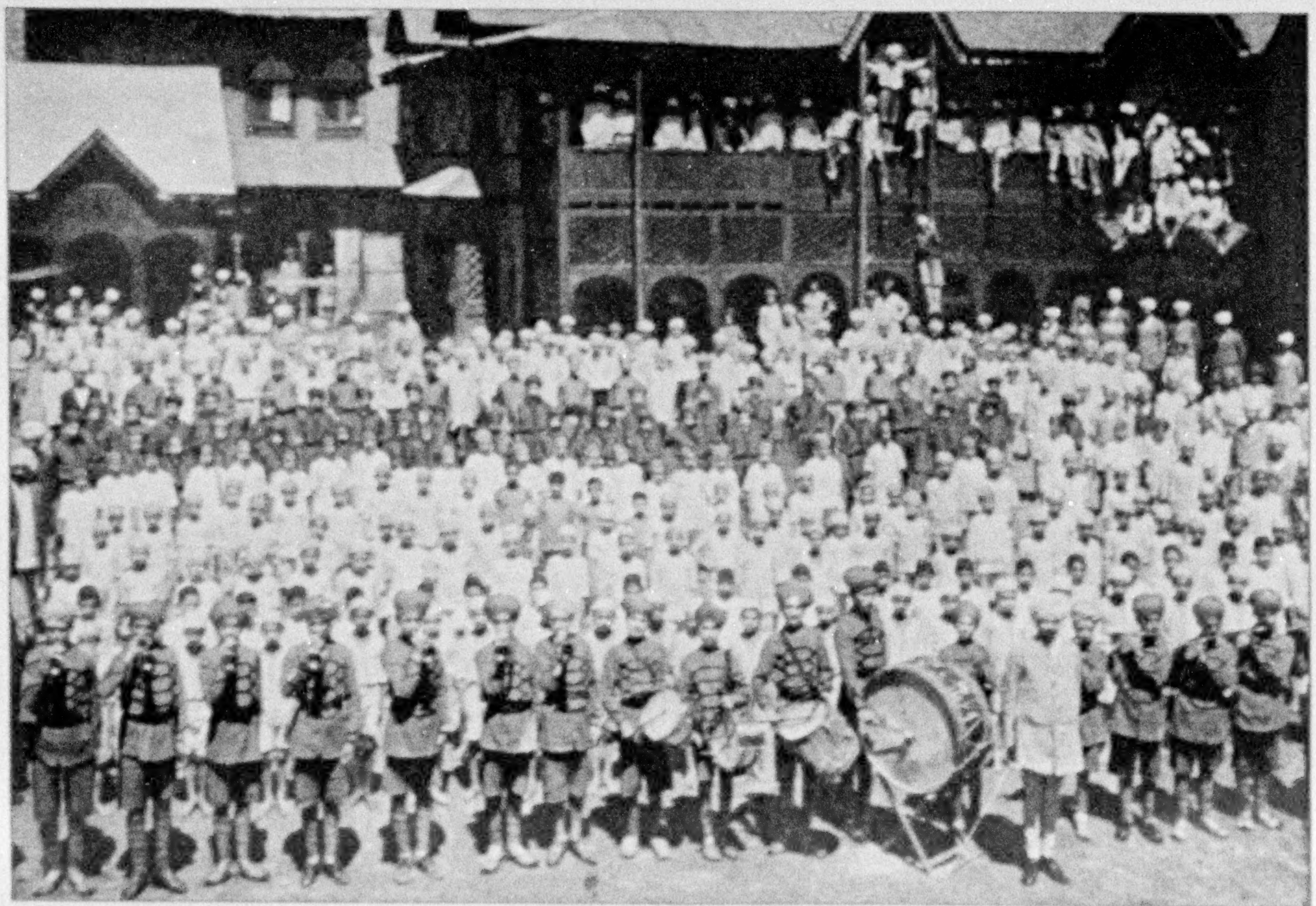
Referring to the elephant's unsightly wrinkled hindquarters, Dickens said the animal employed the worst tailor in all the world! Yet, when decked out as only an Indian potentate knows how, in jewels, in velvets, in gold and silver trappings, he has no equal in sheer breath-taking gorgeousness. At Jaipur, before the Maharaja's palace.

XUM



THE LAND OF LALLA ROOKH—A SWITZERLAND OF THE EAST

Scenery, so thinks the Maharaja, is one of Kashmir's most valuable assets, and the one most likely to attract the foreign traveler to the Vale, "a valley of appealing loveliness, rimmed round with rugged austerity."

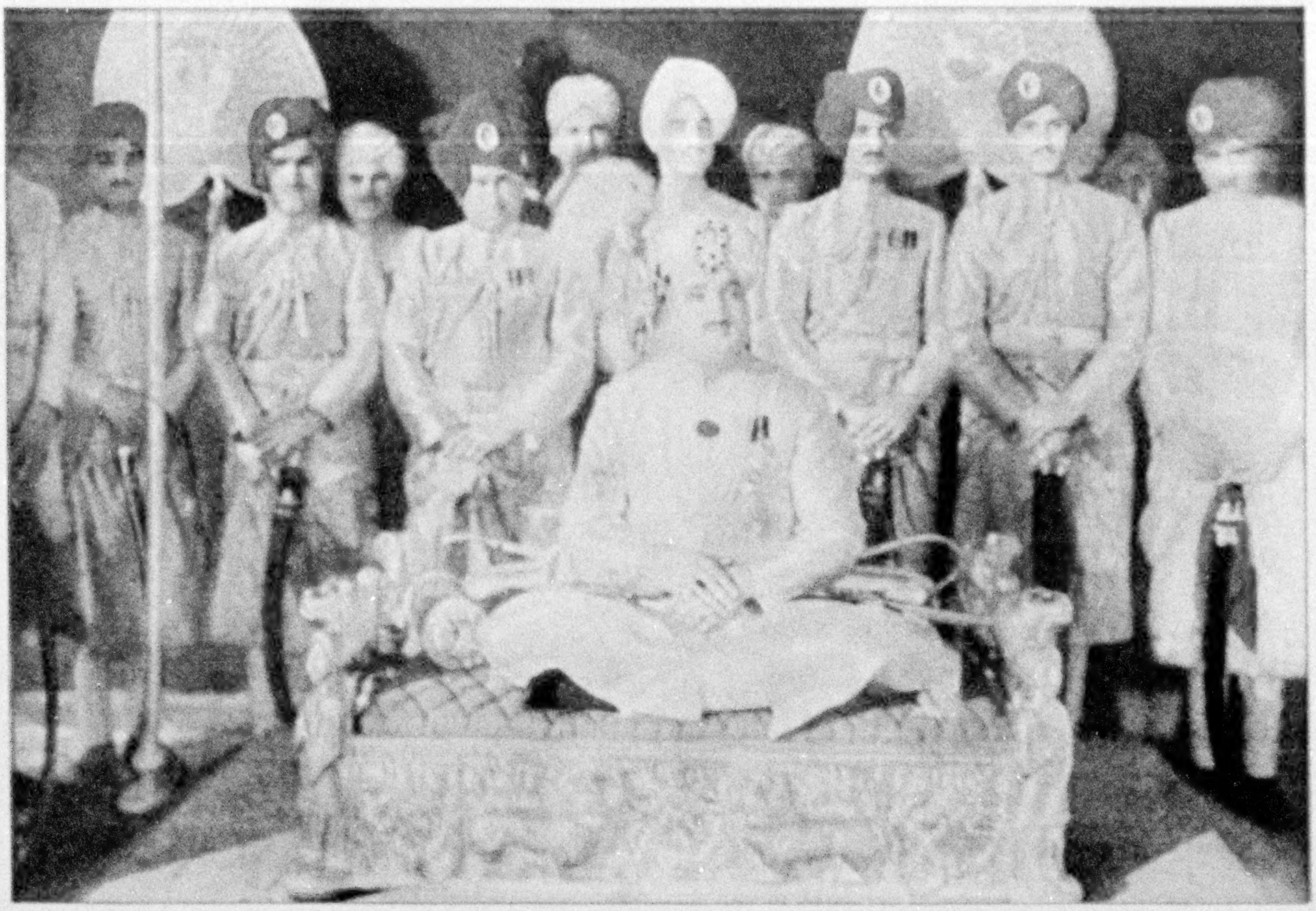


© National Geographic Society

Natural-Color Photographs by Franklin Price Knott

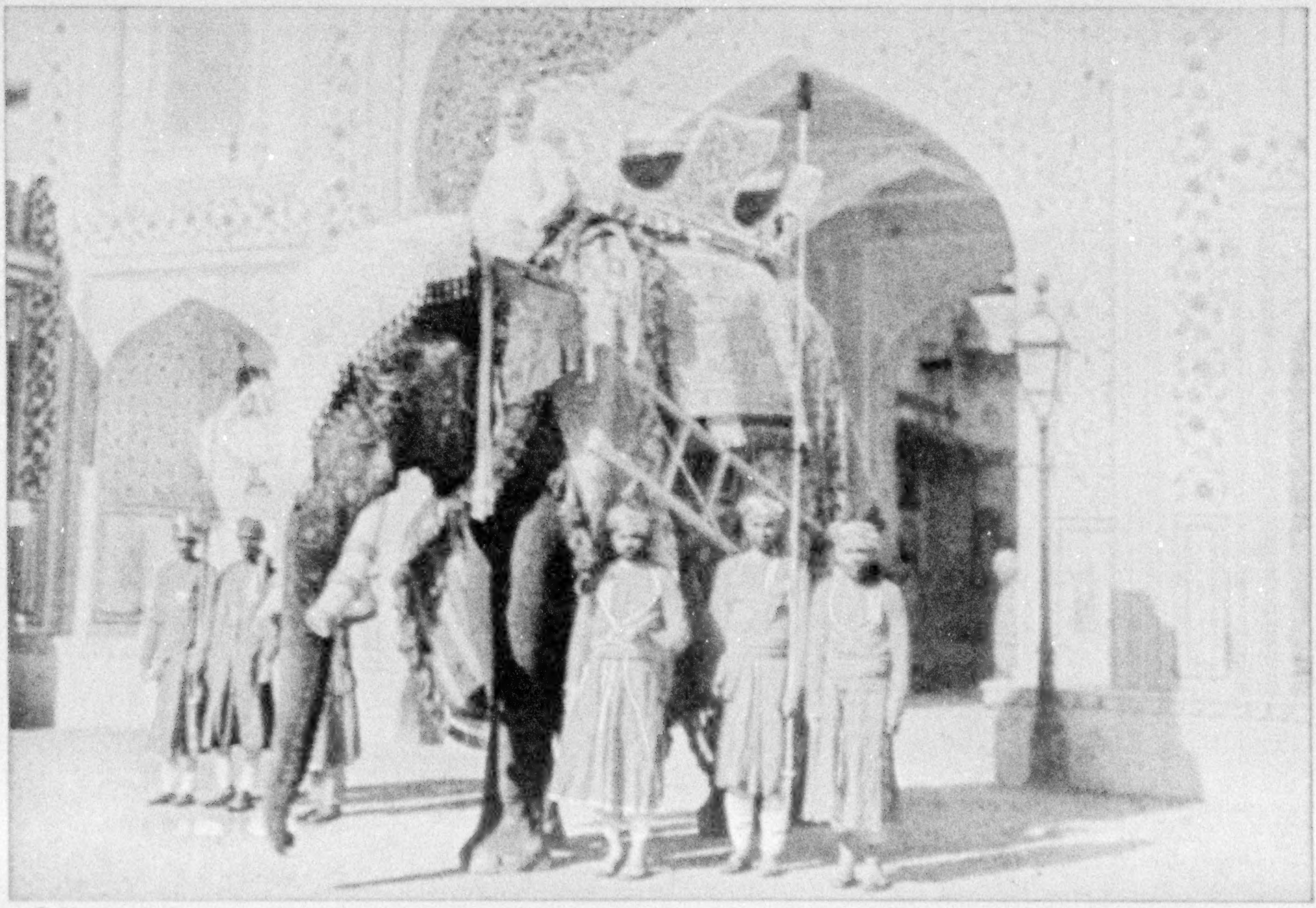
THIS KASHMIR SCHOOL TRANSFORMS ORIENTAL CHARACTER

The Church Mission School of Srinagar has taught its Hindu and Mohammedan students to tolerate all ranks and castes, to play, and to work with each other.



THE MAHARAJA OF JAMMU AND KASHMIR ON HIS GOLDEN THRONE

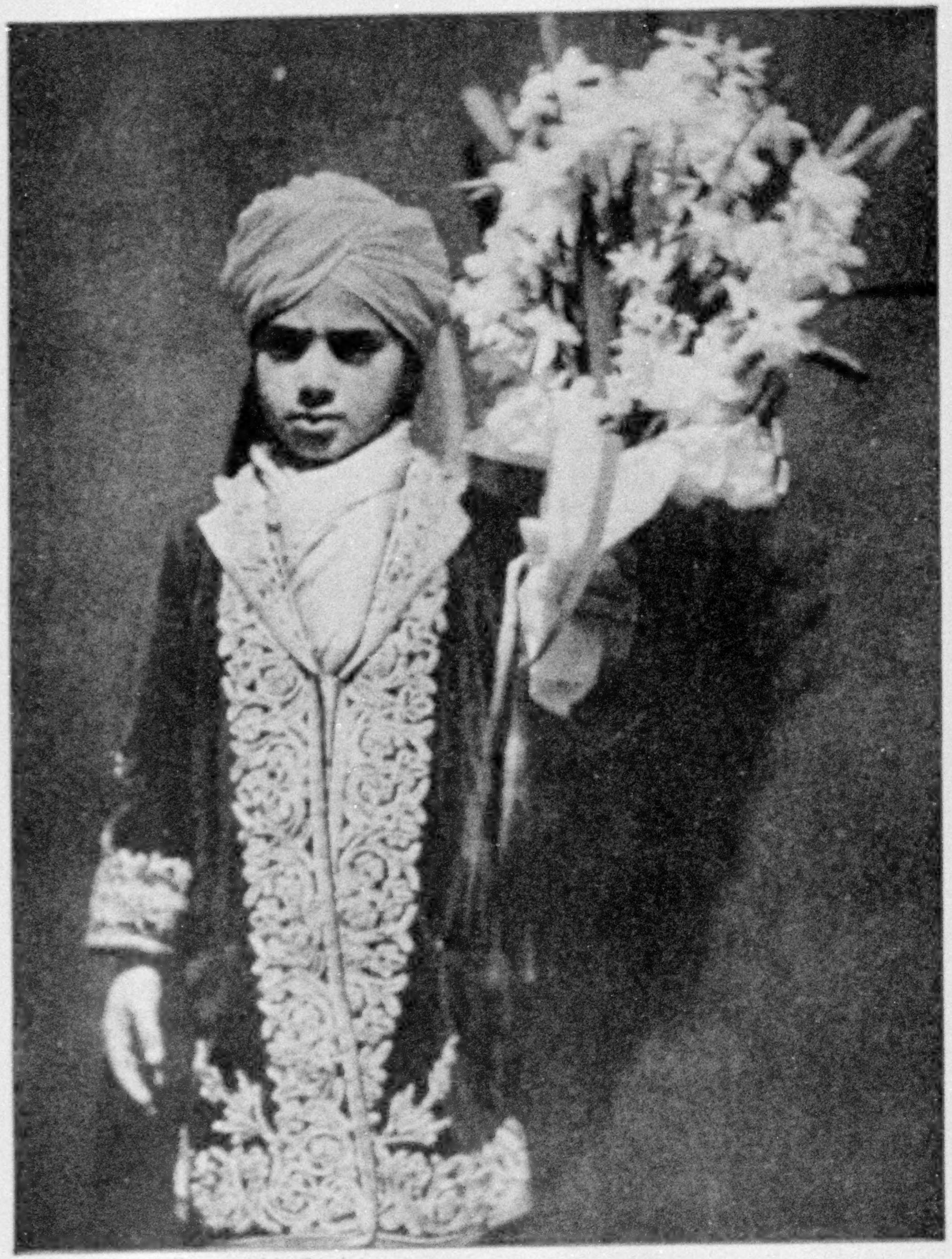
Colonel H. H. Maharaja Sir Hari Singh came to the throne in 1925. This picture, taken at his palace in Jammu, his winter headquarters, shows him in his coronation dress and surrounded by his personal retinue.



© National Geographic Society Natural-Color Photographs by Franklin Price Knott

AWAITING THE MAHARAJA

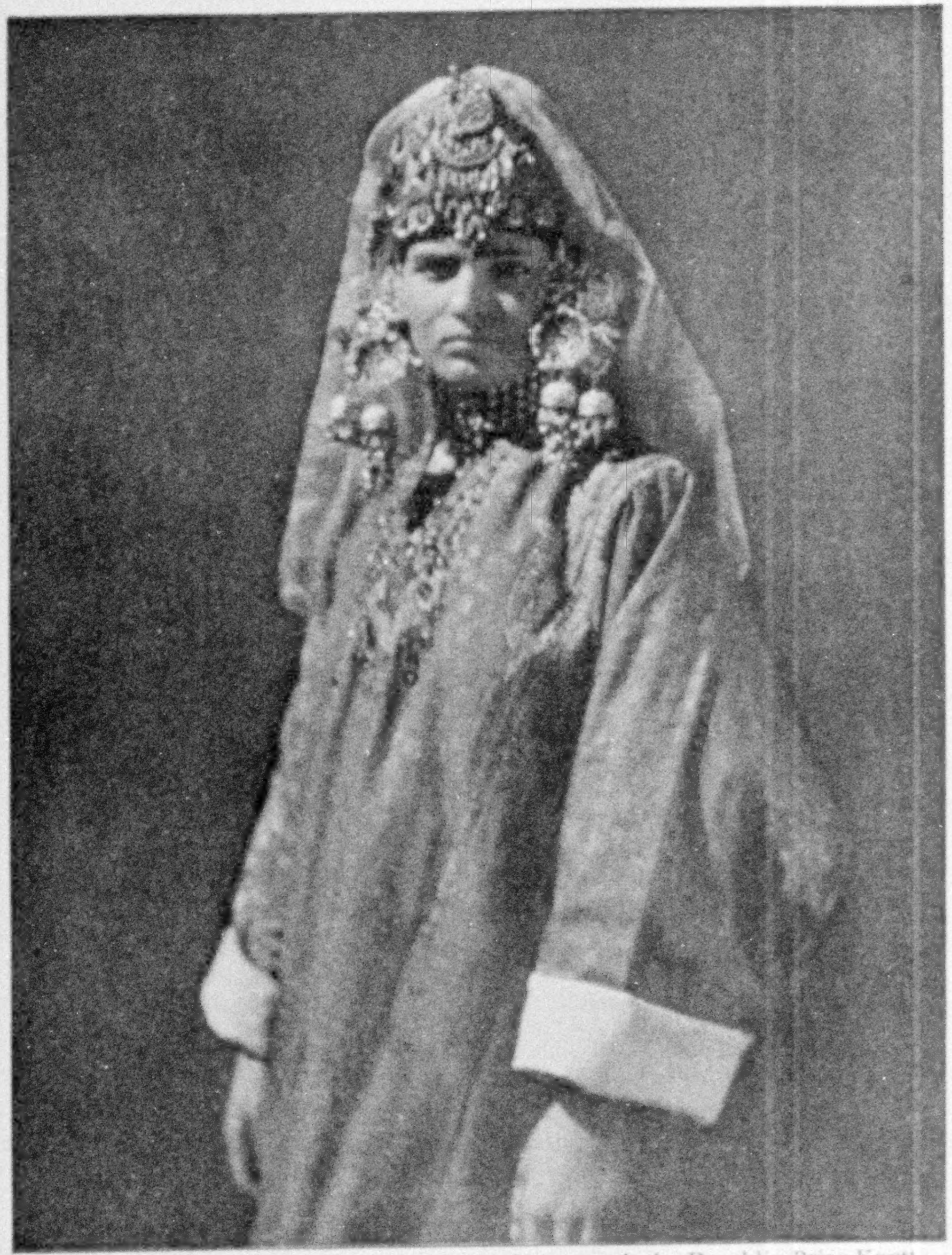
In addition to his gorgeous trappings and inlaid ornaments, the royal elephant's forehead, trunk, and ears are usually painted in the patterns of a shawl (see also Color Plate I).



© National Geographic Society

FLOWERS FOR INDIA'S CHIEF SAHIB

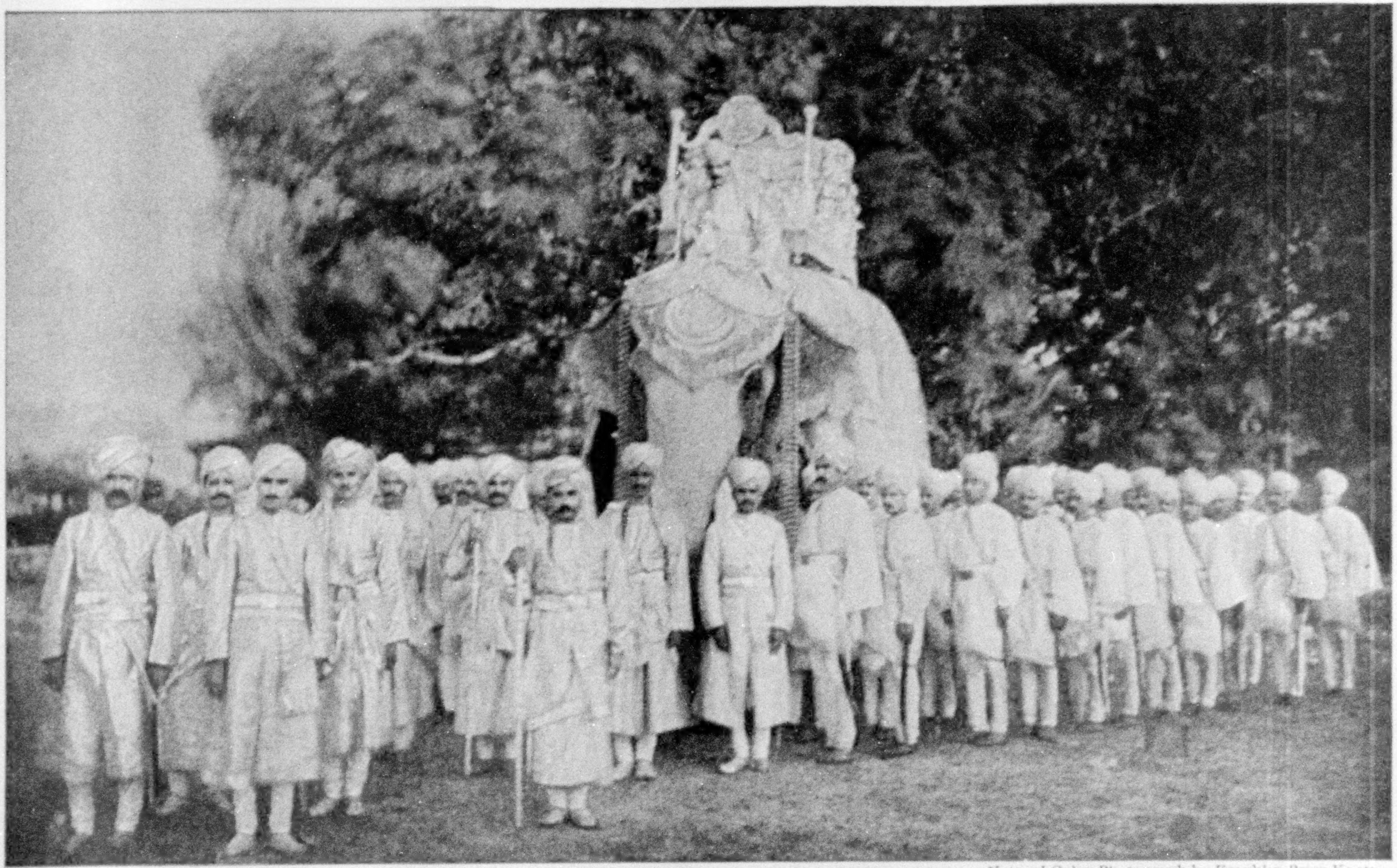
This boy from the Church Mission School at Srinagar is awaiting the arrival of the Viceroy and Lady Irwin



Natural-Color Photographs by Franklin Price Knott

POETS SING HER LOVELINESS

Young, lithesome, her slim hands faintly hennaed, this Kashmiri dancing girl recalls the days of the legendary Lalla Rookh.

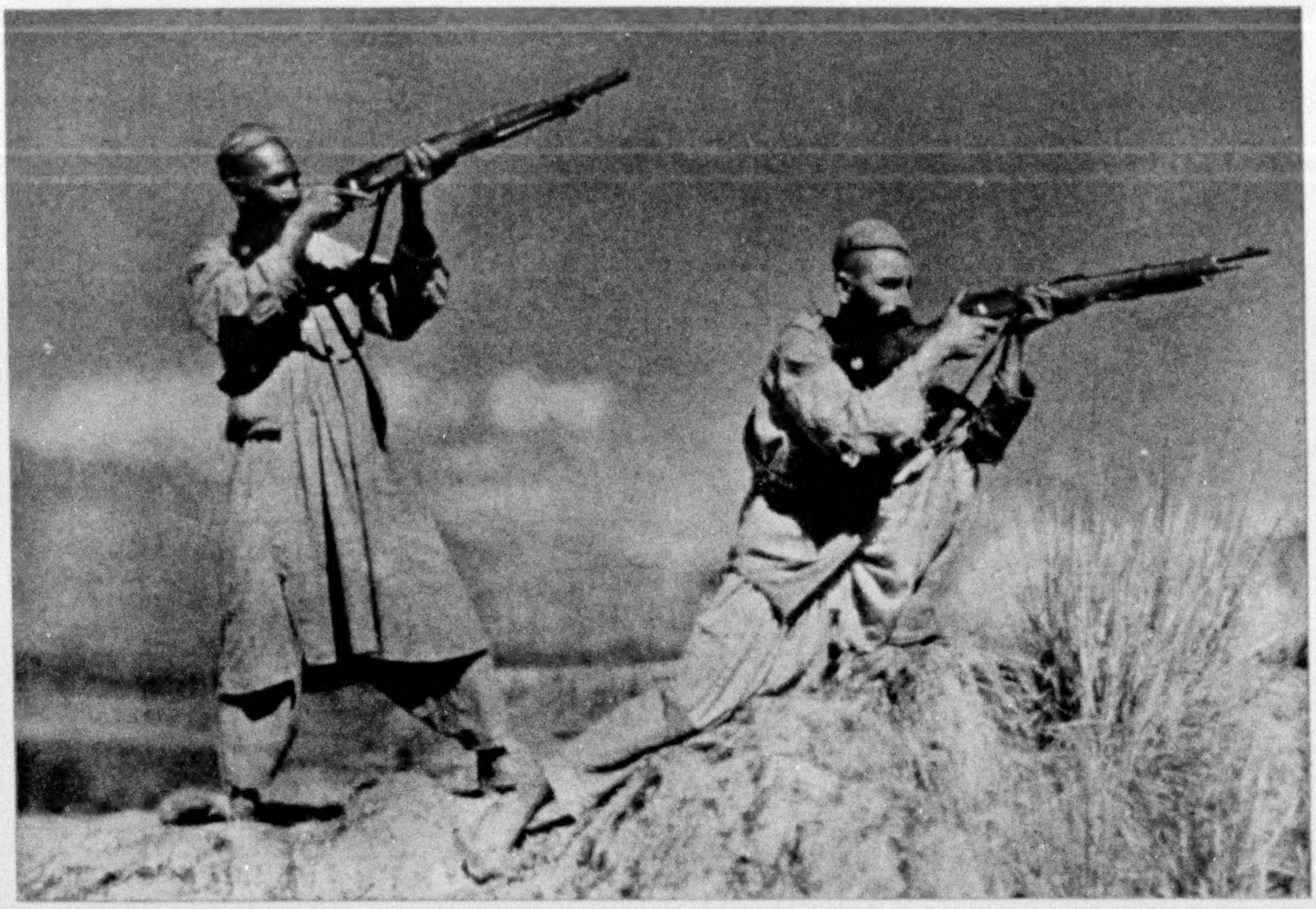


© National Geographic Society

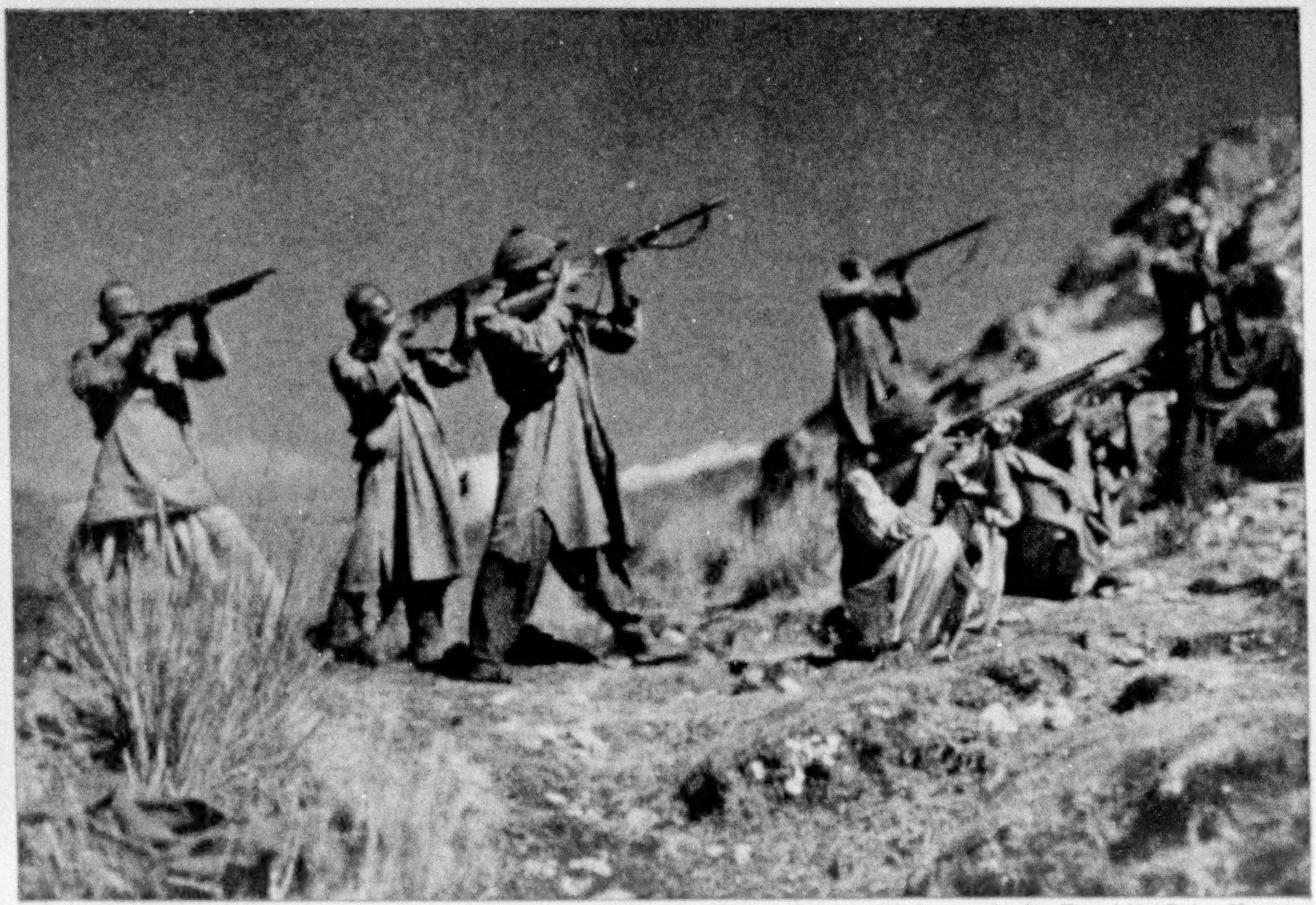
Natural-Color Photograph by Franklin Price Knott

THIS MAJESTIC ELEPHANT, SURROUNDED BY HIS ATTENDANTS, BORE THE MAHARAJA TO HIS CORONATION

Some of the native princes of India maintain enormous palaces, armies of servants and retainers, and stables housing many richly caparisoned elephants, camels, and horses.



AFRIDI GUARDIANS OF THE AFGHAN BORDER

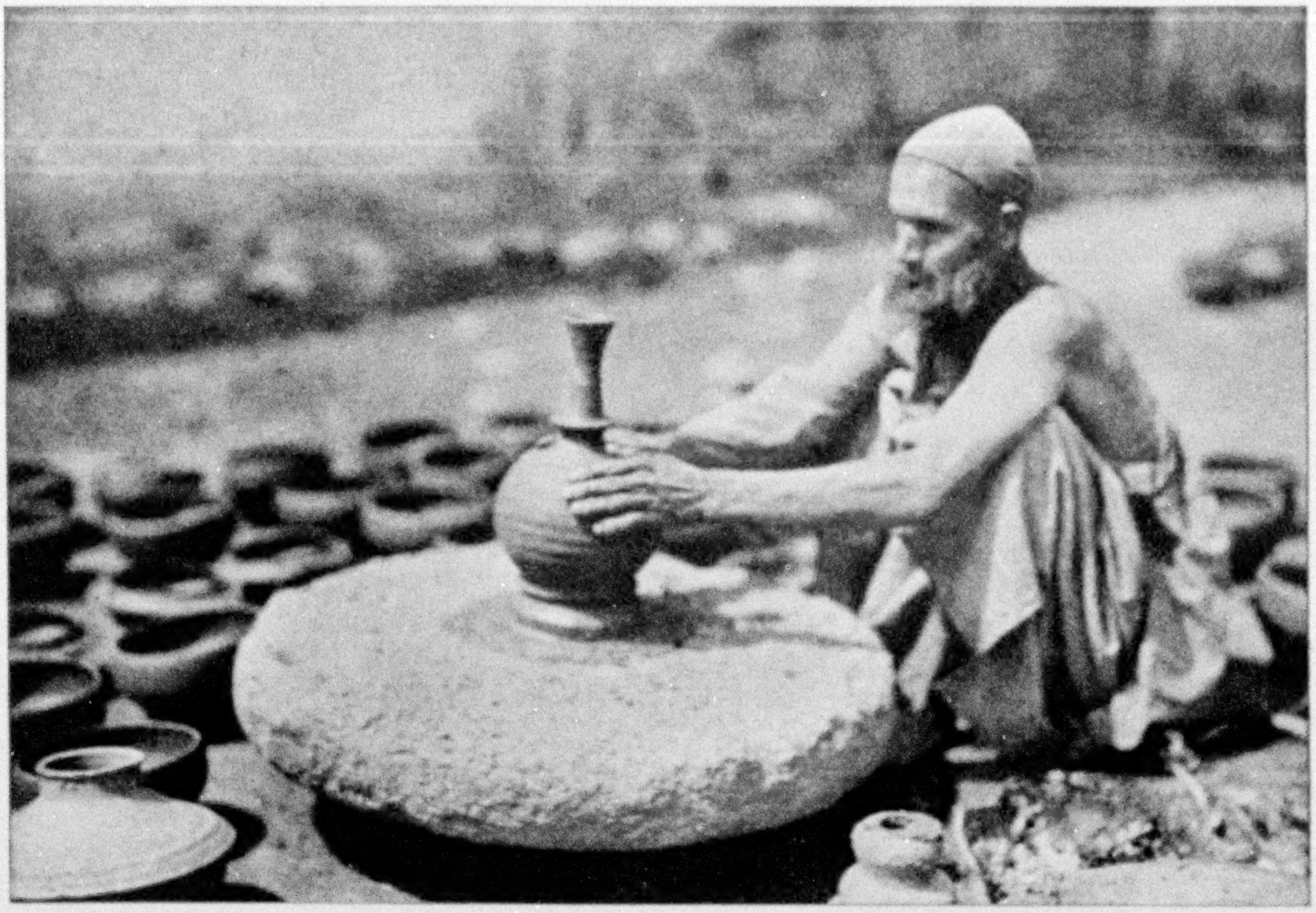


© National Geographic Society

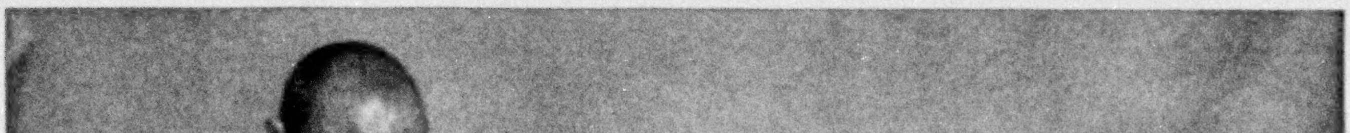
Natural-Color Photographs by Franklin Price Knott

THE AFRIDI MAKES A FIRST-CLASS FIGHTING MAN

Though some of the world's finest skirmishers on their own hills, and excellent soldiers in the Indian Army, these men usually grow homesick when away from their native mountains. Most Afridis live near fabled Khyber Pass, on the Peshawar border of the North West Frontier Province.



DEFT HANDS MAKE QUICK WORK ON THIS SRINAGAR POTTER'S WHEEL

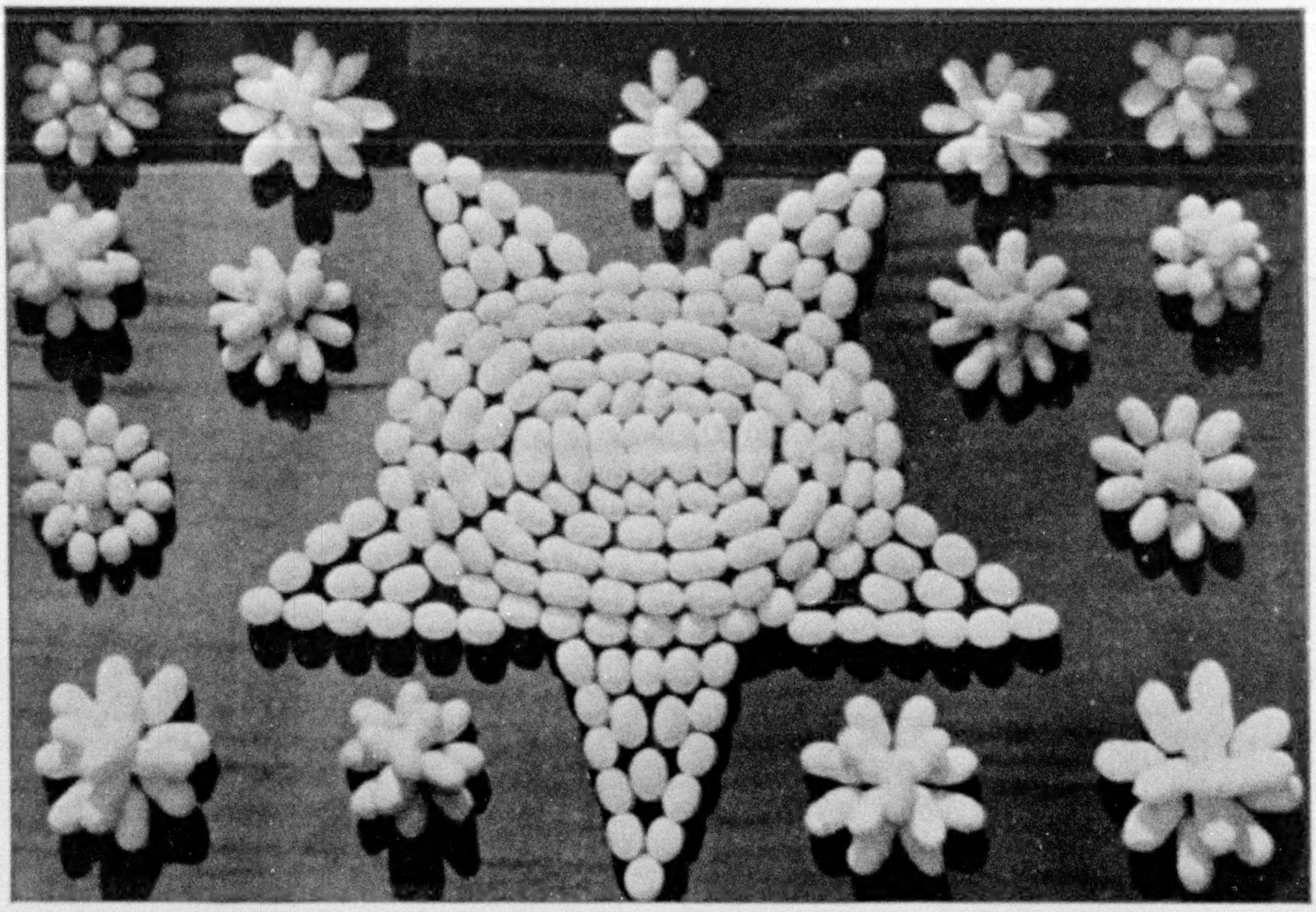


© National Geographic Society

Natural-Color Photographs by Franklin Price Knott

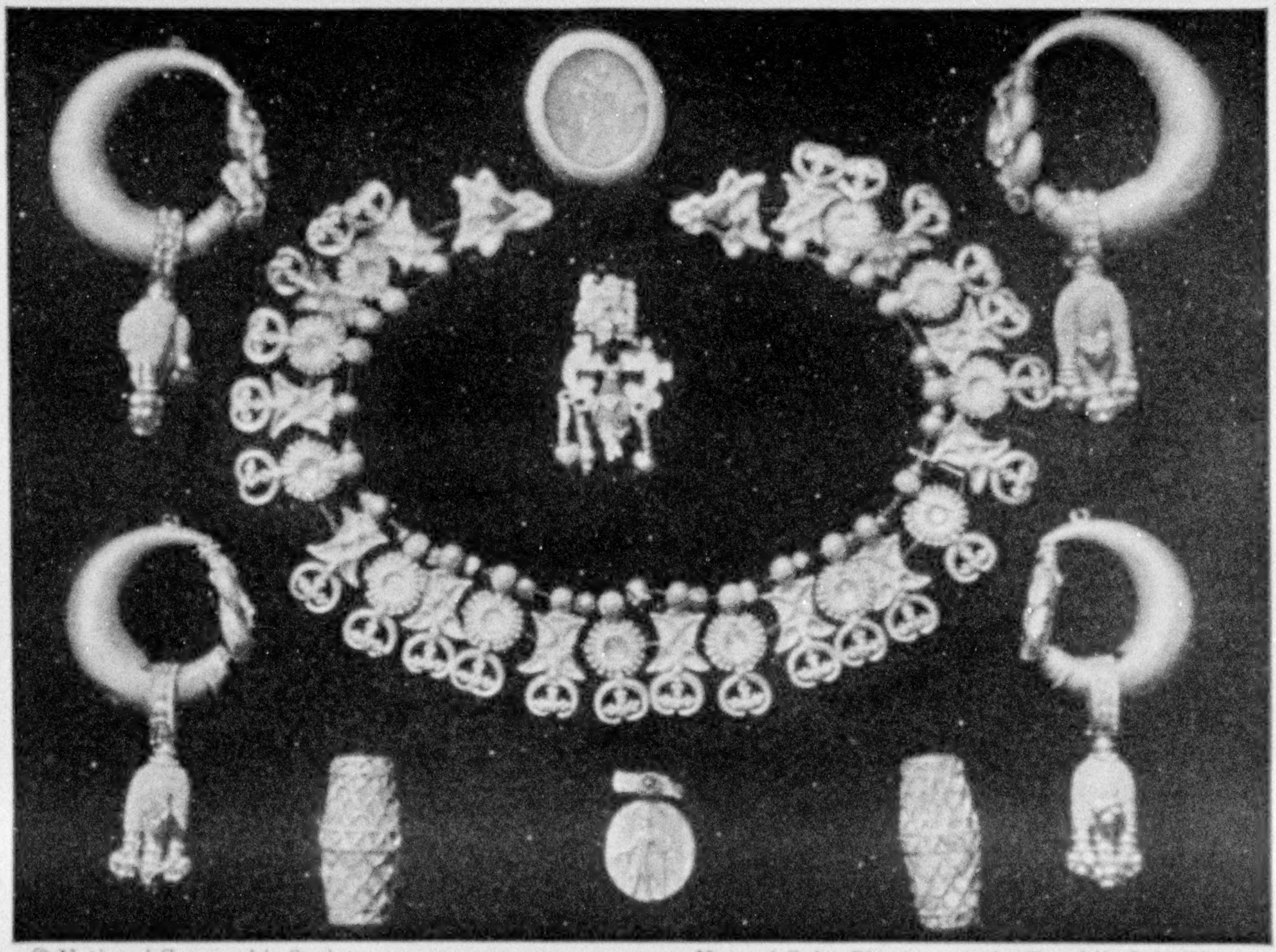
A TONSORIAL ARTIST OF KHYBER PASS

An Afridi barber goes by no rule in cutting hair. He can make a clean shave entirely across the head, or leave tufts of hair on top or at the sides. He is as expert with his steel as his wild fellow tribesmen are with their rifles (see illustrations on opposite page).



COCOONS KEEP THE WHEELS OF KASHMIR'S SILK FACTORY HUMMING

The establishment at Srinagar is one of the largest in the world, employing 5,000 men and women. Five filatures of delicate machinery, each 452 feet long, produce 1,200 pounds of silk a day.



© National Geographic Society Natural-Color Photographs by Franklin Price Knott

JEWELRY FROM TAXILA, WHERE ALEXANDER HALTED

The great Macedonian, eager to surpass the exploits of Hercules, Semiramis, and Cyrus of Persia, by a conquest of India, crossed the Indus 326 B. C. and advanced on this ancient capital and seat of Hindu learning, now in ruins.

HOUSE-BOAT DAYS IN THE VALE OF KASHMIR

BY FLORENCE H. MORDEN

With Illustrations from Photographs by Herford Tynes Cowling

THERE is magic in names. Who of us has not felt the lure hidden in such words as Samarkand, Peshawar, Khartoum, Peking—the far-flung places of the earth which call us in our hours of dreams? So I felt about Kashmir, that beautiful vale which lies in the lower Himalaya, north of the Indian Punjab.

One reaches Srinagar, the summer capital of the native State known as the Domain of the Maharaja of Jammu and Kashmir, over a long route by rail and motor. From Bombay one travels northward by train, via Delhi and Lahore, to Rawalpindi, one of the chief army posts of British India. There the way to beauty opens.

Almost at once on leaving Rawalpindi the motor road begins to climb. Up and up through the deodar-clad slopes of the lower mountains the road twists and turns, the heated air of the plains grows cool and invigorating, until, when we made our first overnight stop at Tret, we felt we wanted to laugh and sing.

Everything amused and interested us. We had landed in India only a few days before and all this Eastern world was new to us. Ruffled punkas swung from the ceiling, though we had no need of them. Our deft and turbaned servants pattered barefooted about the rooms, unrolling our bedding on the stringed *charpoys,* the fairly comfortable beds of India. Even the not-too-bad food served by the bungalow cook was a matter for hungry jest.

Lovely, lovely world, with a summer of Kashmir ahead.

BY MOTOR TO KASHMIR'S CAPITAL

The road from Rawalpindi to Srinagar is a well-built motor road, some 200 miles long, and it lies through the mountains north of the Pir Panjal Pass. Snowy peaks rose high above us. The rushing waters of icy streams chattered noisily below. Hairpin turns in the road made me catch my breath and curl my toes, for the ways of the native driver are his own and without fear, and, alas, I had not the knowledge of his language wherewith to express my feelings.

Soon, ah soon, from the first traveling Sahib, I learned to say, *"Ahista, ahista!"* But I never succeeded in making an Indian chauffeur drive slowly, slowly.

MUD ROOFS ABLOOM WITH IRIS

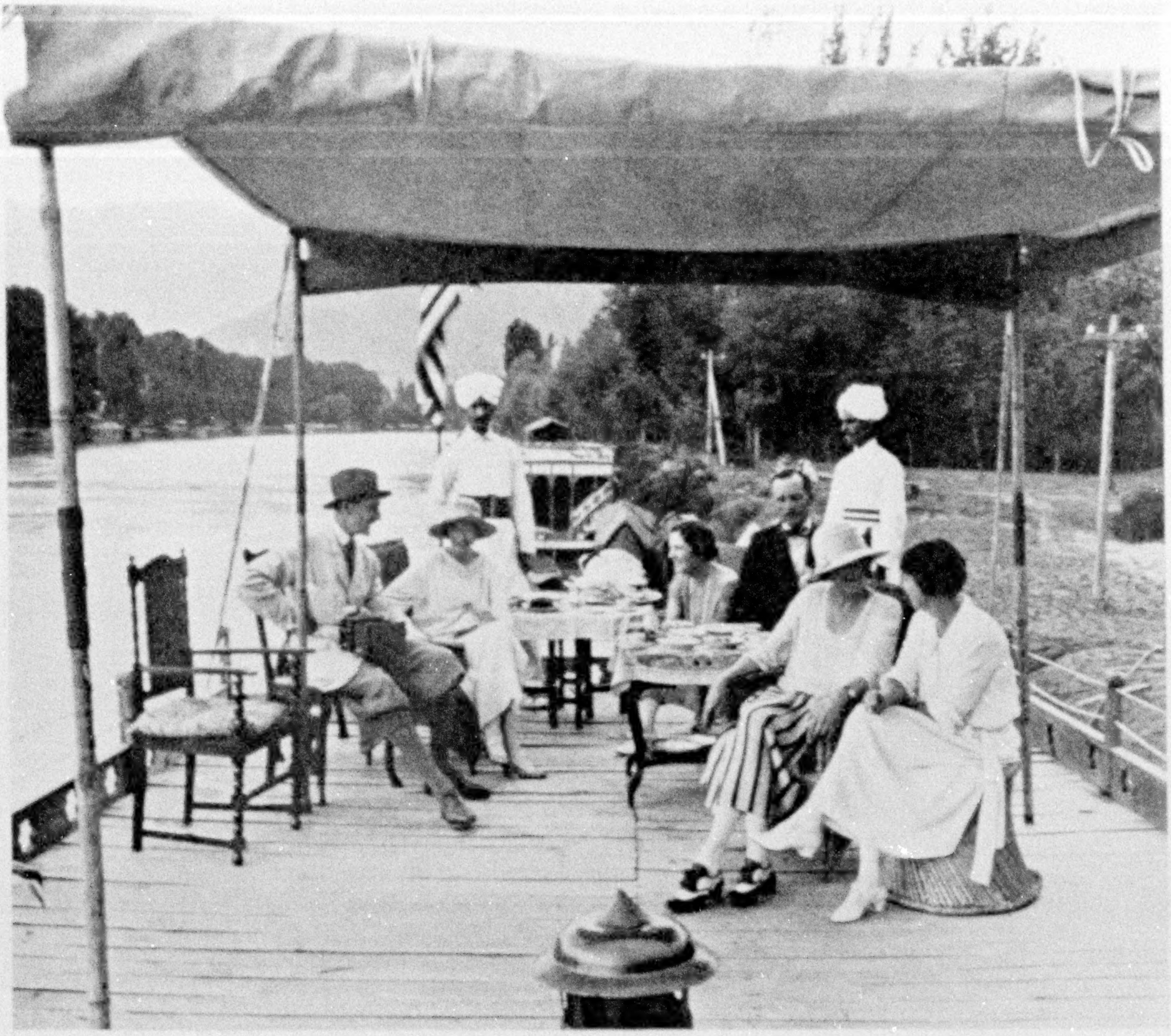
It is possible to make the trip to Srinagar in a day, but not ahista! Quite the contrary. We spent two nights in dak bungalows (resthouses) along the way, the second at Baramula, which lies at the edge of the great depression known as the Vale of Kashmir.

From Baramula one can go the rest of the way by boat, up the Jhelum River; but we preferred to drive. The last 35 miles lie across a level stretch, the road bordered on either side by slender poplars. It was in April and the peasants waded knee-deep in the paddy fields.

The mud roofs of the flat-topped houses were abloom with irises, purple and white, with slim green leaves. The people we passed along the way were quite different from those we had seen in India. *Ekkas* and *tongas,* the two-wheeled horse-drawn vehicles of the country, drew aside to let us pass. I know of no delight equal to drinking in the first sights in a foreign land.

The Vale of Kashmir is a level valley about 80 miles long and averaging about 20 miles in width. It lies, a great oval, surrounded by mountains green with deodar and spruce on the lower reaches and white with snow above until well into the early summer. Skies of an incredible blue complete a color scheme of fairy loveliness. Throughout the valley winds the curving line of the River Jhelum, along the banks of which straggle the streets and bazaars which form the ancient city of Srinagar.

Seven curious bridges span the river, and along the shore quaint old wooden houses lean sometimes at a rakish angle. Many of the city streets end in wide stone steps leading down to the river's edge. These stairways are usually animated scenes of native life. Here the laundry-



AFTERNOON TEA ON THE UPPER DECK OF THE "MELISANDE"

Usually some English friends, on leave from lower India, would drop in to chat with the Americans. Old Glory flies because it happened to be Decoration Day (see, also, text below). Though the Kashmiri is a skillful boat builder, he did not invent the house boat. It was introduced into the country some 40 years ago.

men wash the clothes; here the women come to fill their water jars. Children tumble and play about, and goats and cows ramble freely among them all. From the overhanging balconies lengths of dyed pashmina (see page 452) hang out to dry. All is colorful and gay.

MANY OF SRINAGAR'S INHABITANTS LIVE AFLOAT

Also there is the interesting river life. A large part of the population of Srinagar lives afloat. Odd, long, pointed boats, called *dungas*, with a superstructure hung with mats of woven reeds, are the only homes which thousands of Kashmiris ever know. Sleeping quarters within, a kitchen of sorts open to the eyes of all, a few pots of brass or copper, and a poor Kashmiri's household is complete.

The native of more ample means has a better boat. Walls of wood replace the woven mats, and as better and better financial status is indicated, so the boats improve. The best are comfortable and well-furnished house boats, such as one might see upon the River Thames.

The English have made their contribution in the development of the house boat in Srinagar; for the Vale of Kashmir has become not only a favorite vacation land for the English Army in India, but the permanent home of many retired officers and their families.

When we first arrived we took a temporary boat; then arranged to take over

"PALE HANDS I LOVED, BESIDE THE SHALIMAR"

Against a background of falling water, a Punjabi girl dances on a stone platform rising from the green swirl of a flowing stream. In these stately pleasure gardens near Srinagar, on a corner of Dal Lake, the great Mogul emperor Jahangir and his favorite wife, Nur Mahal, spent many a delightful summer day (see text, page 461).

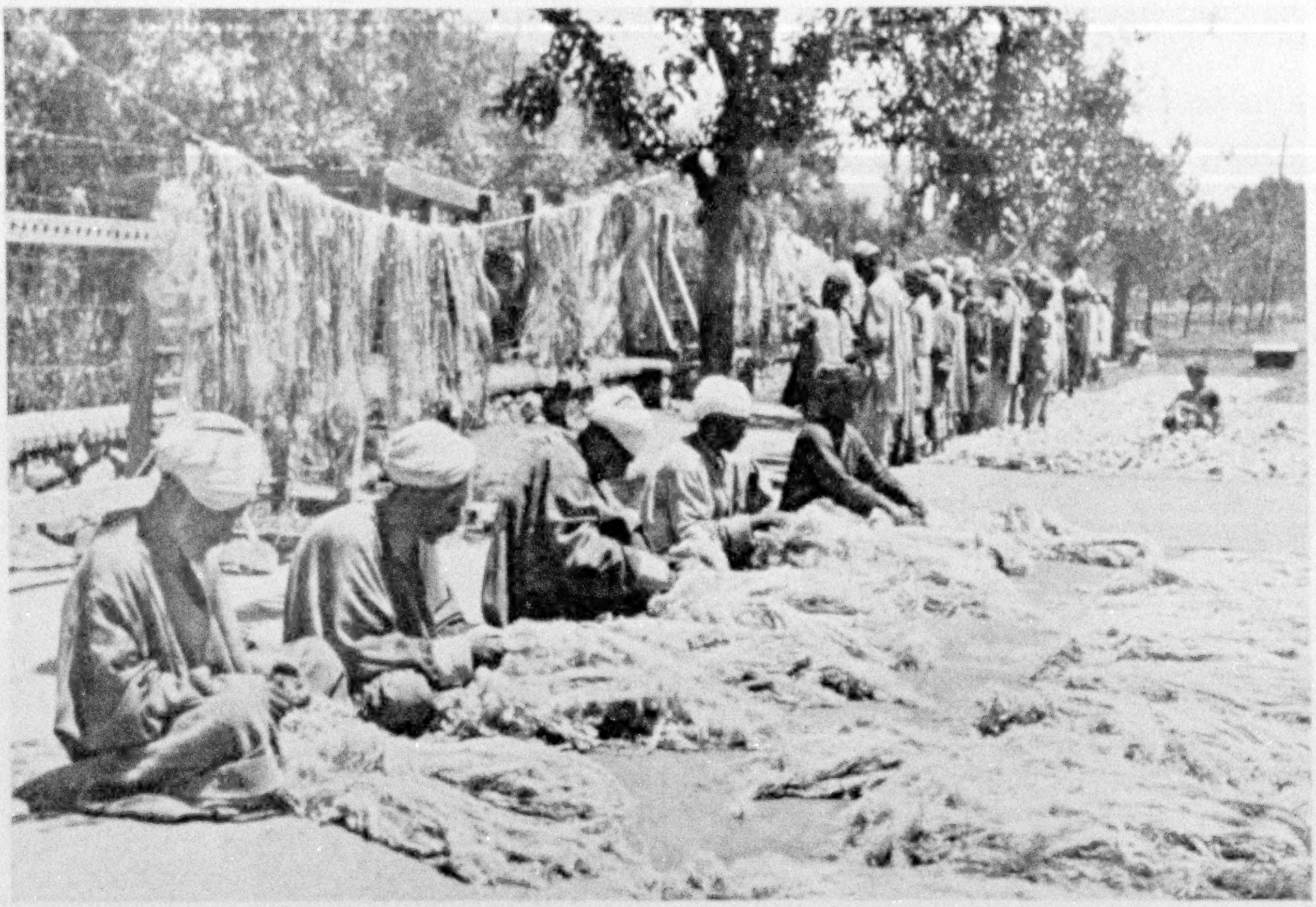
the delightful house boat which was the year-round home of an English colonel and his wife.

It was while on the shabby little temporary house boat that I had my first experience in dealing with the native servant. On Colonel T——'s boat I was to take over all the servants except the cook. There was a cook attached to the first little boat, but our meals there were awful. So I decided not to take to the new home such a poor specimen as the toothless, turbaned object I had seen hovering over the stove in our queer little kitchen. Calling him before me, I explained through my bearer, who spoke English of sorts, that I was moving to T—— Memsahib's boat, would have T—— Memsahib's servants, and that his services would not be required.

He protested with a flow of tears and strange words, but I was firm. Reluctantly he disappeared in the direction of the cook boat. Soon at the gangplank leading to our door appeared a native, turbaned and shod as for the street. He held out to me his book of chits, or references. Through my English-speaking bearer we talked, and as his references were good I engaged him. He was to come next day to T—— Memsahib's boat.

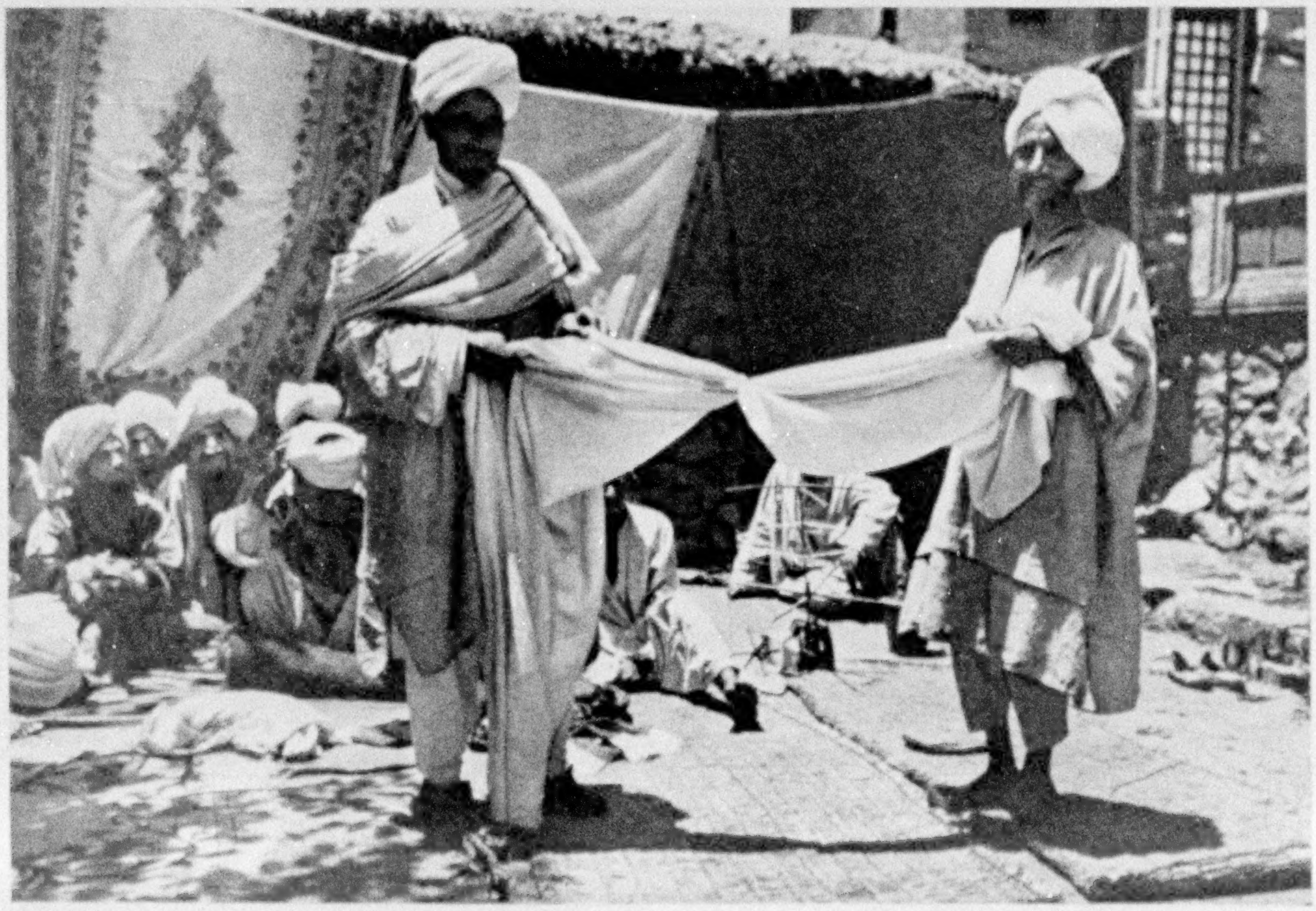
When we moved on the morrow my toothless failure from the cook boat started to follow. More tears; more language; more firmness.

The next morning, at T—— Memsahib's



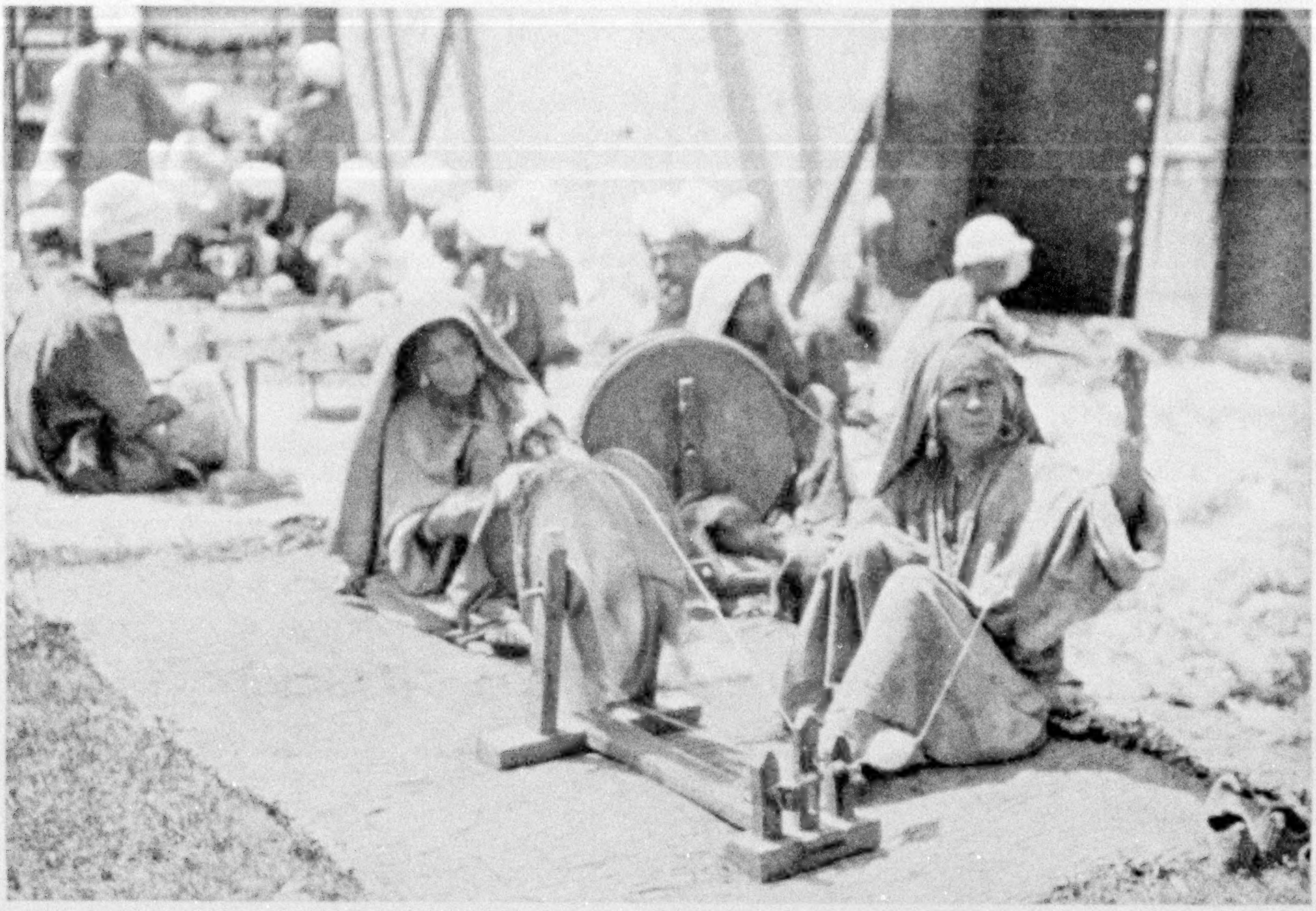
NONE OF THE COCOON IS WASTED

Only part of the fine thread forming the silkworm's cocoon can be unwound in the tepid baths; the balance is here being pulled or shredded into a soft tangle known as spun silk.



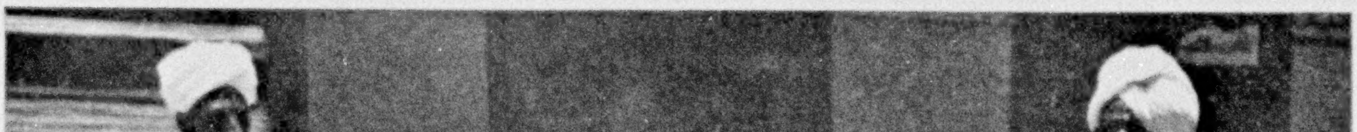
IN THEIR HEYDAY, KASHMIR SHAWLS KEPT 16,000 LOOMS HUMMING

To show the fineness of their wares, these merchants draw the *pashmina* through a finger ring—hence the term "ring shawl." Kashmir's famous industry, dating from the beginning of the 16th century, is almost extinct to-day, but at one time it employed more than 25,000 persons. Napoleon made these glowing textiles popular when he gave some to Josephine.



CRUDE WOODEN WHEELS OBEY THE TOUCH OF DEFT FINGERS

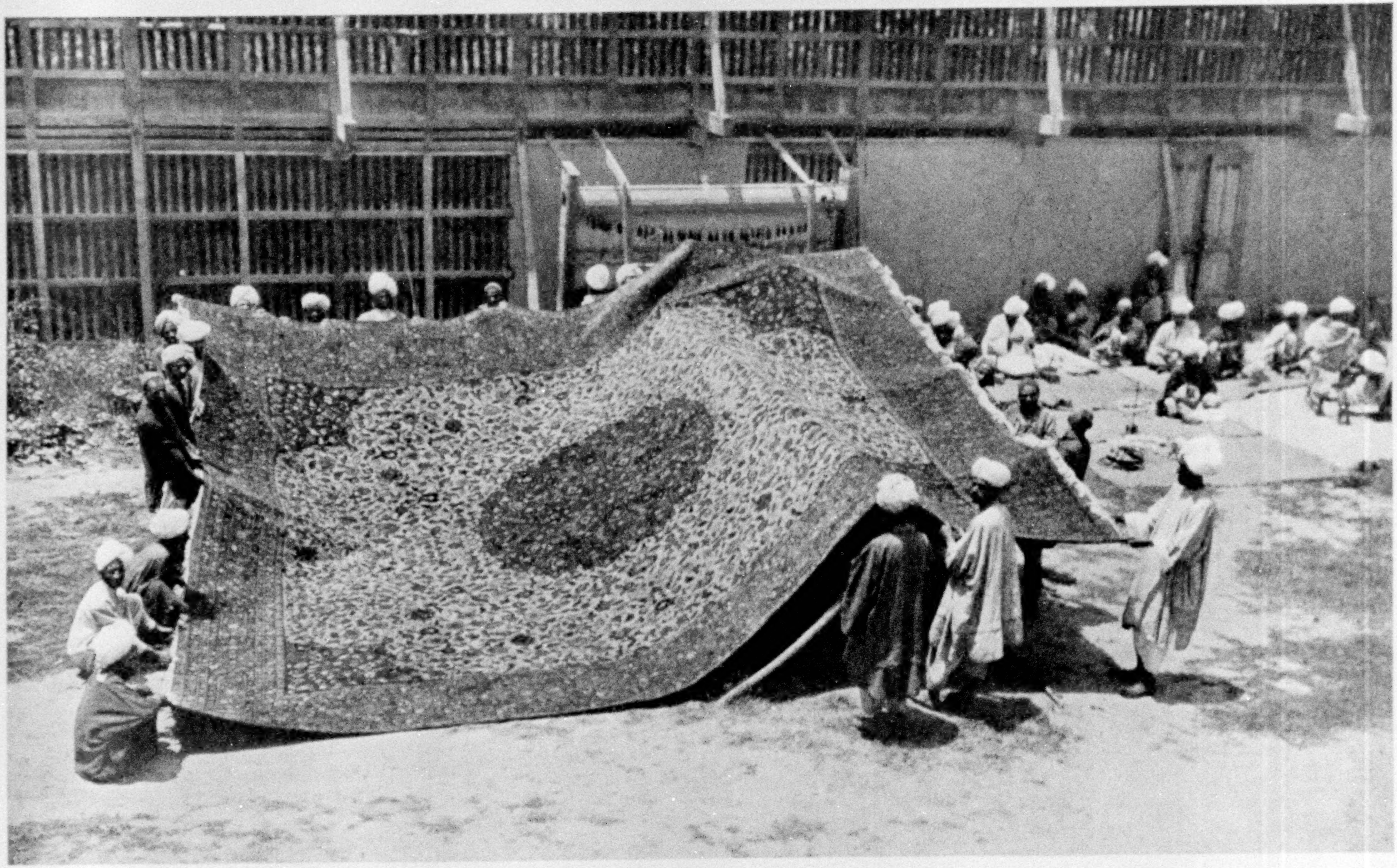
Women spin the soft, woolen thread that goes into the making of the rugs for which Kashmir is fast becoming famous (see, also, illustration, page 442).



THE CENTRAL ASIAN NUMDAH—A MINOR TRADE LINK BETWEEN EAST AND WEST

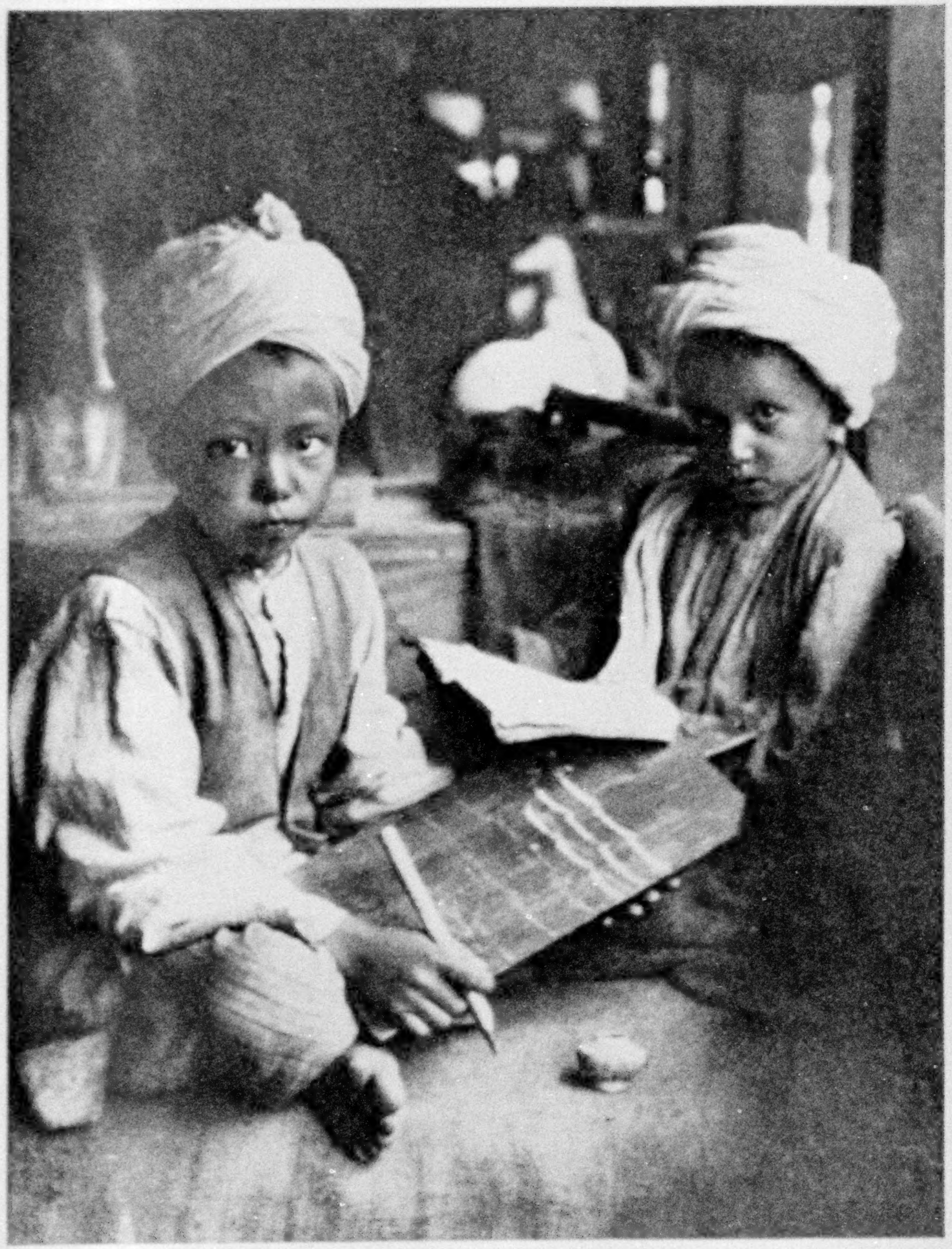
Such coarse felts, used by some Chinese Turkestan tribes for rugs, boots, blankets, and tent coverings, now find a ready sale in England and the United States. Many are sent to Kashmir to be elaborately embroidered, for some of the shawl workers, after the death of the more famous industry (see page 445), took up this newer work.

XUM



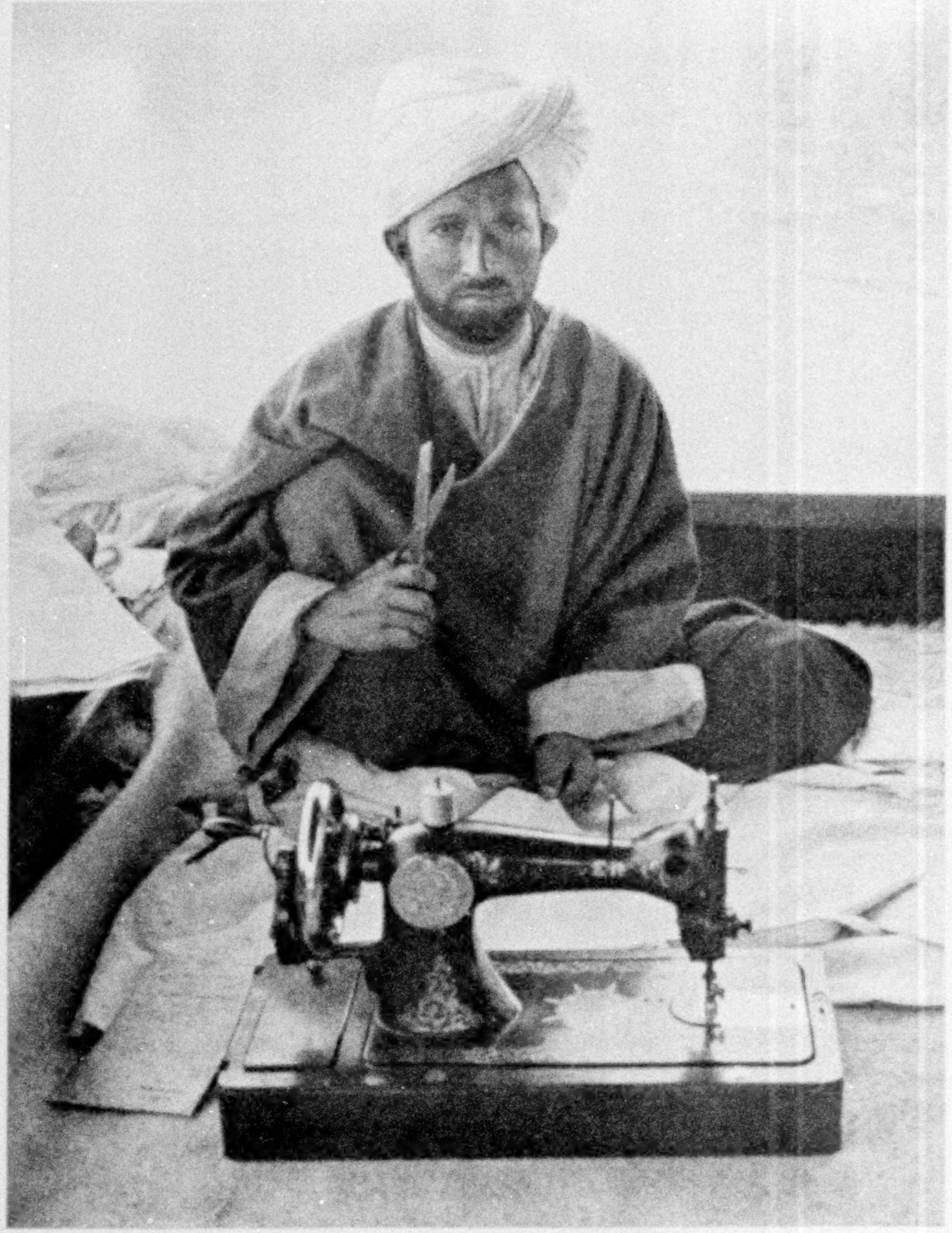
WHEN THE KASHMIR SHAWL WENT OUT OF FASHION, THE KASHMIR CARPET TOOK ITS PLACE

The finished rug of excellent quality and design has just been taken from the loom. Almost the entire output of this concern goes to a Chicago store. In Kashmir the dyes are good, and the finest wool is obtainable, much of the *pashm* (the soft under wool of the Tibetan goat) formerly used for shawls now being used as a basis for the best grades of carpets. Many of the old shawl weavers now exercise their skill upon these newer products.



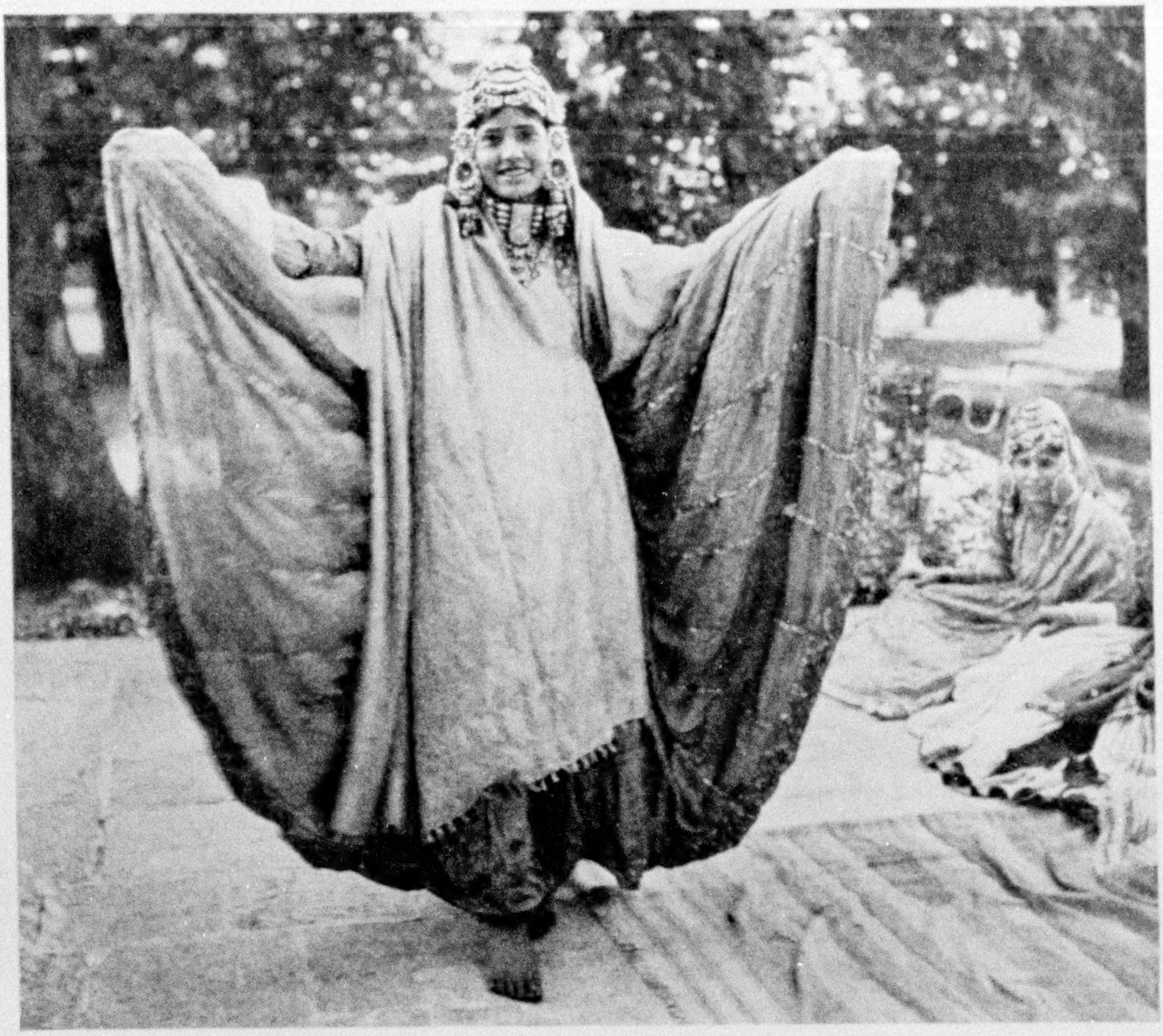
THE THREE R'S IN KASHMIR

With brush and paint pot, lads struggle to master the characters of their native language. The letters resemble elaborate shorthand notes. The schoolboy's slate is a board smoothed with a piece of glass, his pen a stalk of Indian corn, and his inkwell a bottle holding chalk and water.



"DHURZI" SEWED CHEERILY AND WELL

The author's needleman squatted daily on the rear deck of the *Melisande* with his little American-made, hand sewing machine before him. His embroidery was excellent and his drawn-work the envy of all foreigners (see, also, text, page 445).



IN ALL THE CHARM OF HER NATIVE COSTUME

The headdress of this Kashmiri dancer is a gold-embroidered cap incrusted with many jewels and hung with heavy pendants, which give the effect of earrings. The high, close-fitting collar is also jeweled.

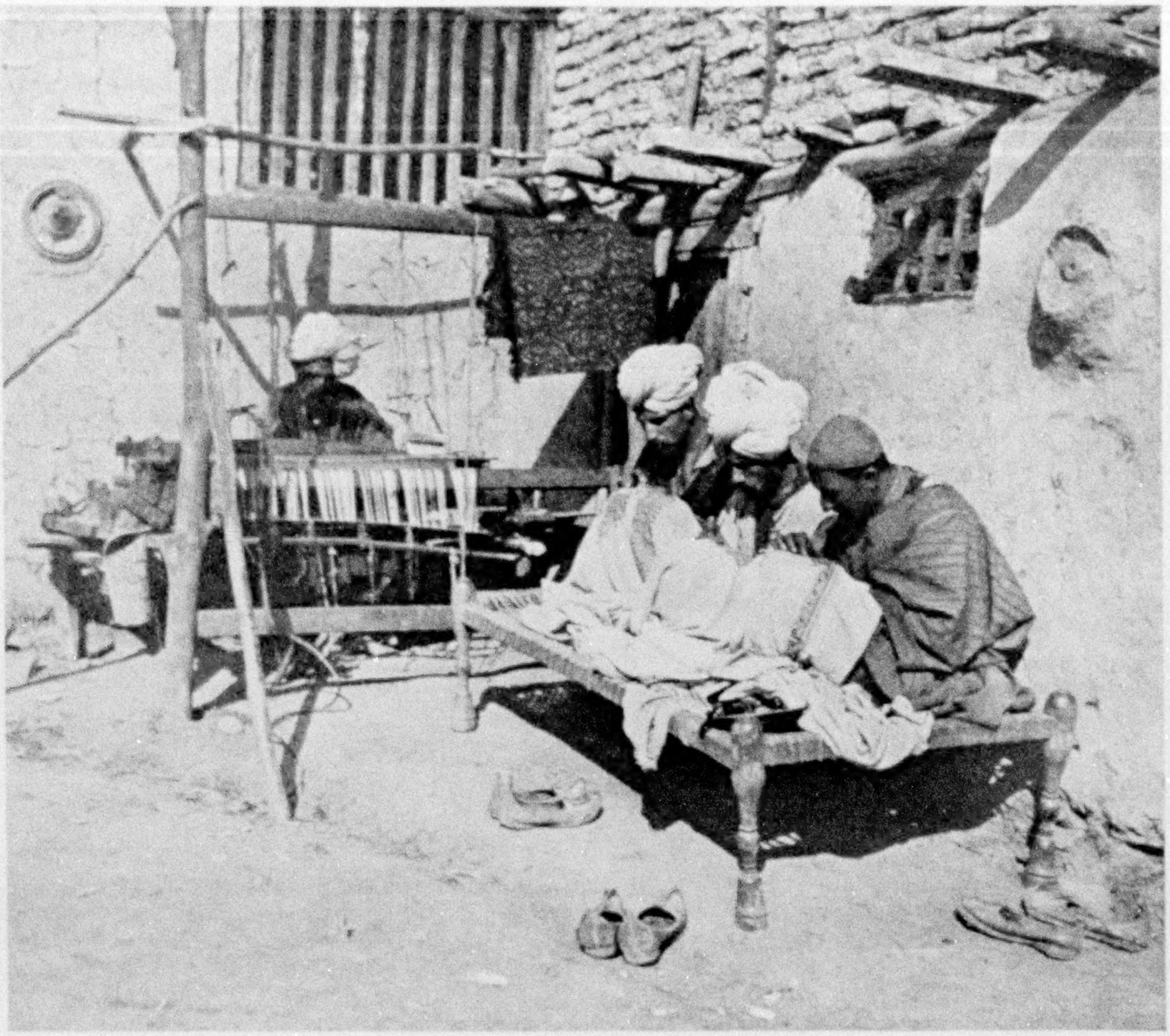
boat, no cook appeared, and I sent my boy posthaste to know the reason. He returned with a much-beshawled individual in tow, who promptly took possession of the new cook boat. It was about a week later that I learned that they were one and all the same cook. By native wit he had played upon the fact that to a new arrival in a strange land all natives look alike. As my sister said, "He came in one door and was fired; in another and was hired—fired, hired; hired, fired!"

ELEVEN SERVANTS FOR THE WAGE OF ONE

But eventually he became a fixture, and, strange to say, in the better surroundings of our English floating home, proved a most excellent cook.

Our new house boat, the *Melisande*, was delightful, and we settled easily and happily into the life of the place. We had ample room. Our living room boasted a piano and a tiny open fireplace—luxuries indeed. The dining room could seat six with comfort. A single and a double bedroom, with bathrooms adjoining, gave us all the sleeping space we needed. An upper deck, with easy chairs about, made an ideal lounging place (see page 438).

To the rear swung the cook boat, so that none of the odors of food or chattering of servants disturbed us. Flowers we had in abundance and birds sang everywhere. Early in the morning and at dusk the full-throated note of the bulbul lent its incredible sweetness. The river slipped past our mooring with ever-changing charm.



THE SUPERB NEEDLEWORK OF KASHMIR IS DONE BY MEN

Embroiderers, sitting cross-legged on a stringed *charpoy* (a kind of light bed), feel no lack of dignity in their task. The work may be on wool, silk, or cotton, and usually reflects rare taste both in color and design.

One lives easily in Kashmir. The host of servants we had cost about as much as one good cook at home, and they feed themselves. Each one has his appointed duties and does them fairly well.

HOUSEHOLD SERVANTS ARE ALL MEN

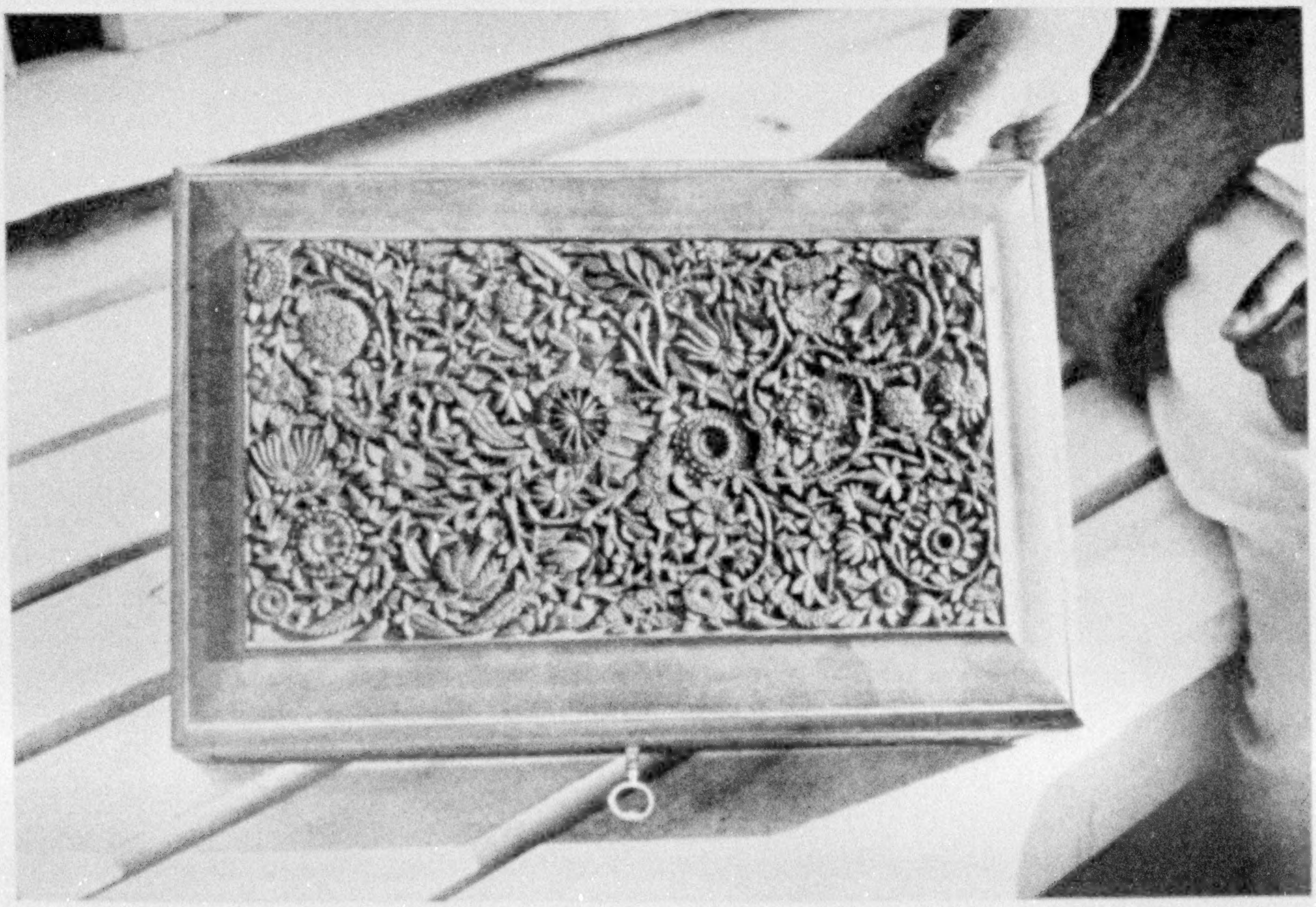
All our servants were men. The women of Kashmir seldom work out. Even the little children frequently have men servants to care for them. Our list was as follows: *mangi*, or head boatman; *khitmatgar* (chief house servant), assistant khitmatgar, *bhisti* (water-carrier, sweeper — of lowest caste and doer of menial jobs), *khansaman* (cook), *dhobi* (washerman), *dhurzi* (sewing man), *mali* (gardener), and three little *chhokeras*, the small boys who paddled the *shikara*, a small gondola-like boat in which we went everywhere. It seems an ample list.

We had many amusing times with the lot of them, as I am sure they had with us. My khitmatgar, Aziza, and the dhurzi, Mohamad Khan, were my two favorites. The latter, a devout and bearded Mohammedan, squatted daily on the rear deck of the boat, a little hand-operated sewing machine in front of him, and sewed and sewed (see page 443).

His handwork would have done credit to a convent and he could copy anything. Both outer and underclothes, drawn-work, and embroidery he could turn out with ease. I have seen him, when needing a seam held taut, catch a fold between his bare brown toes, leaving both slim hands free for more intricate action. His turban

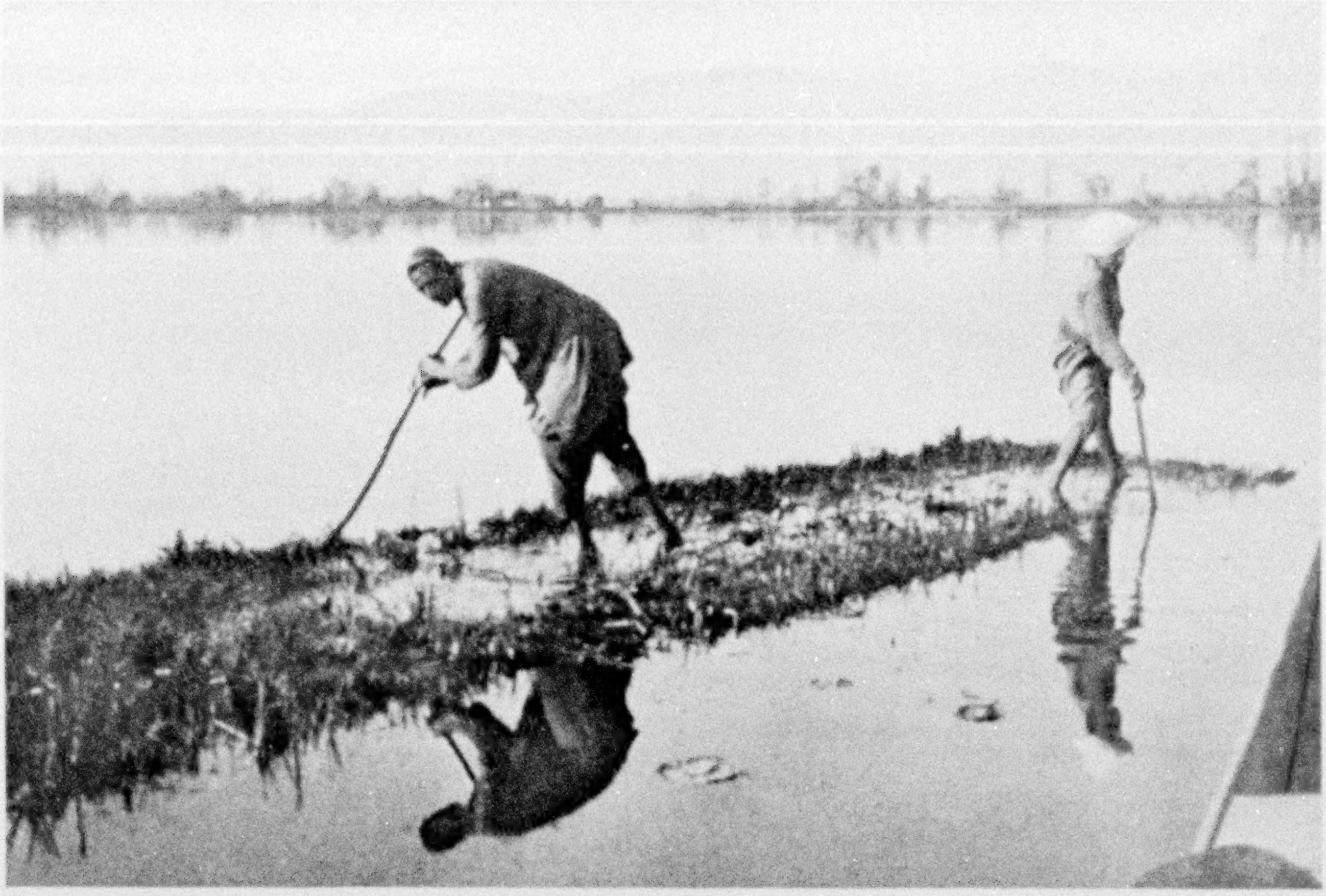
SRINAGAR, THE CITY OF THE SUN, SPANS THE JHELUM WITH SEVEN BRIDGES

Old-time chronicles speak of an enormous number of houses in the capital of Kashmir—as many as 3,600,000—and of five-story pine-wood mansions, with apartments, halls, galleries, and towers reaching to the clouds. To-day its most notable feature is its jumble of rickety wooden houses, royal palaces, balconied shops, rich tradesmen's homes, mosques, and temples—all with a foreground of sweeping river and a background of snowy mountains.



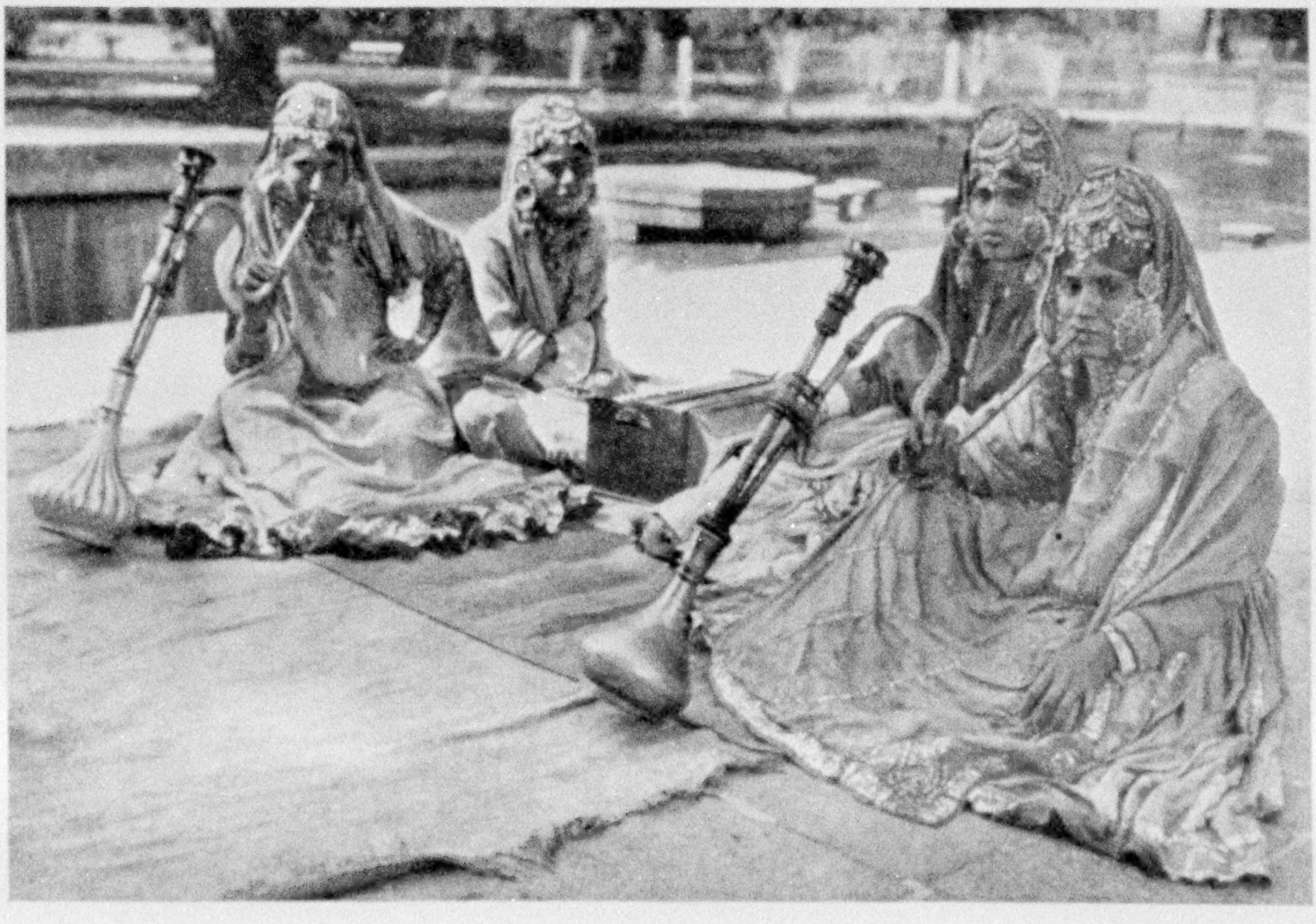
WEEKS OF PAINSTAKING LABOR GO INTO THE MAKING OF SUCH A BOX

Wood-carving is one of the arts of Kashmir, and handsome boxes, panels, screens, and tables may be purchased in Srinagar's bazaars.



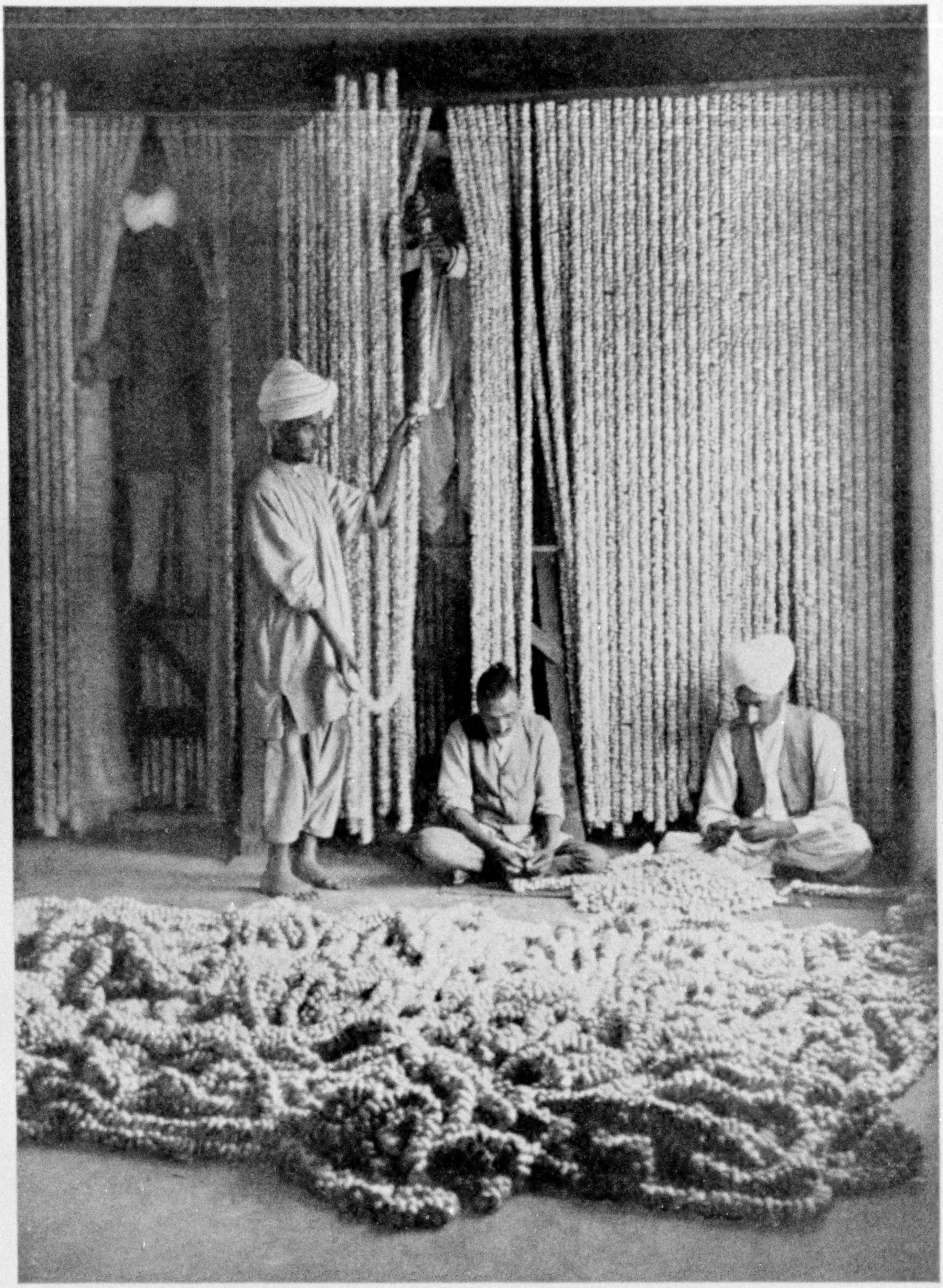
A BIT OF FLOATING GARDEN BEING POLED ACROSS DAL LAKE

It will be tied to a boat or to stakes driven in the lake bed. Then seeds will be planted in the rich soil which has been dug up from the bottom of the lake, and which is held together with a network of fine twigs. These gardens are similar to the *chinampas* of Lake Xochimilco, in Mexico (see "The Venice of Mexico," by Walter Hough, in the NATIONAL GEOGRAPHIC MAGAZINE for July, 1916).



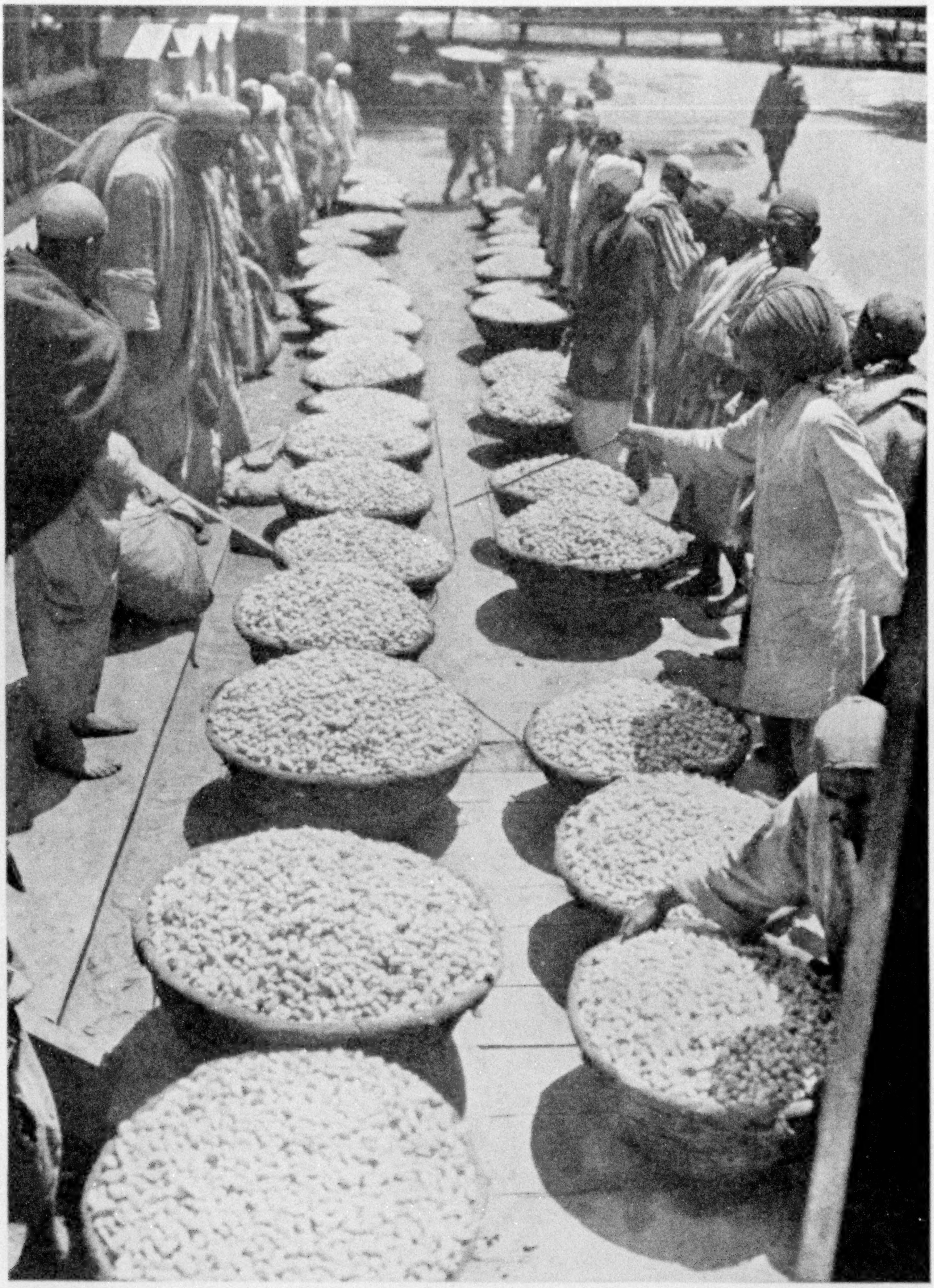
THE USE OF THE HOOKAH IS NOT CONFINED TO MEN

Sometimes these mammoth water pipes are beautifully made and elaborately decorated with gold and silver inlay.



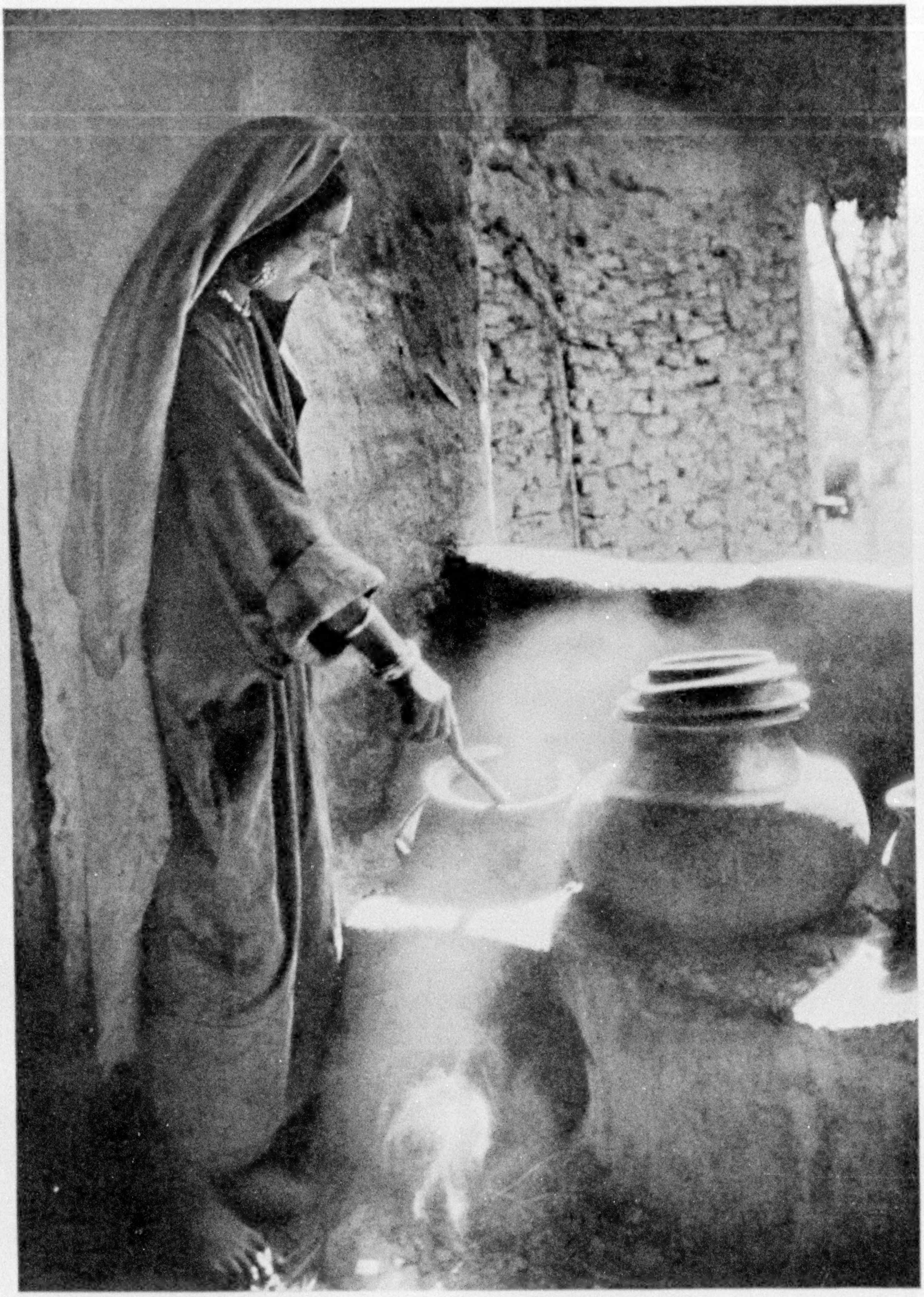
STRINGING COCOONS IN A SILK FACTORY

These silky envelopes have been selected to maintain the supply of breeding moths. They are carefully strung and kept at a constant temperature for a while, and the pupa, instead of being killed by steeping in acid, by steam, or dry heat before the cocoon is reeled off as silk, is allowed to develop into a silkworm moth. When the winged wonders emerge from the envelopes, they are captured and cared for, as every one of them is a source of income, now as in the old days when Kashmir furnished some of the Bactrian silk which found its way to Damascus.



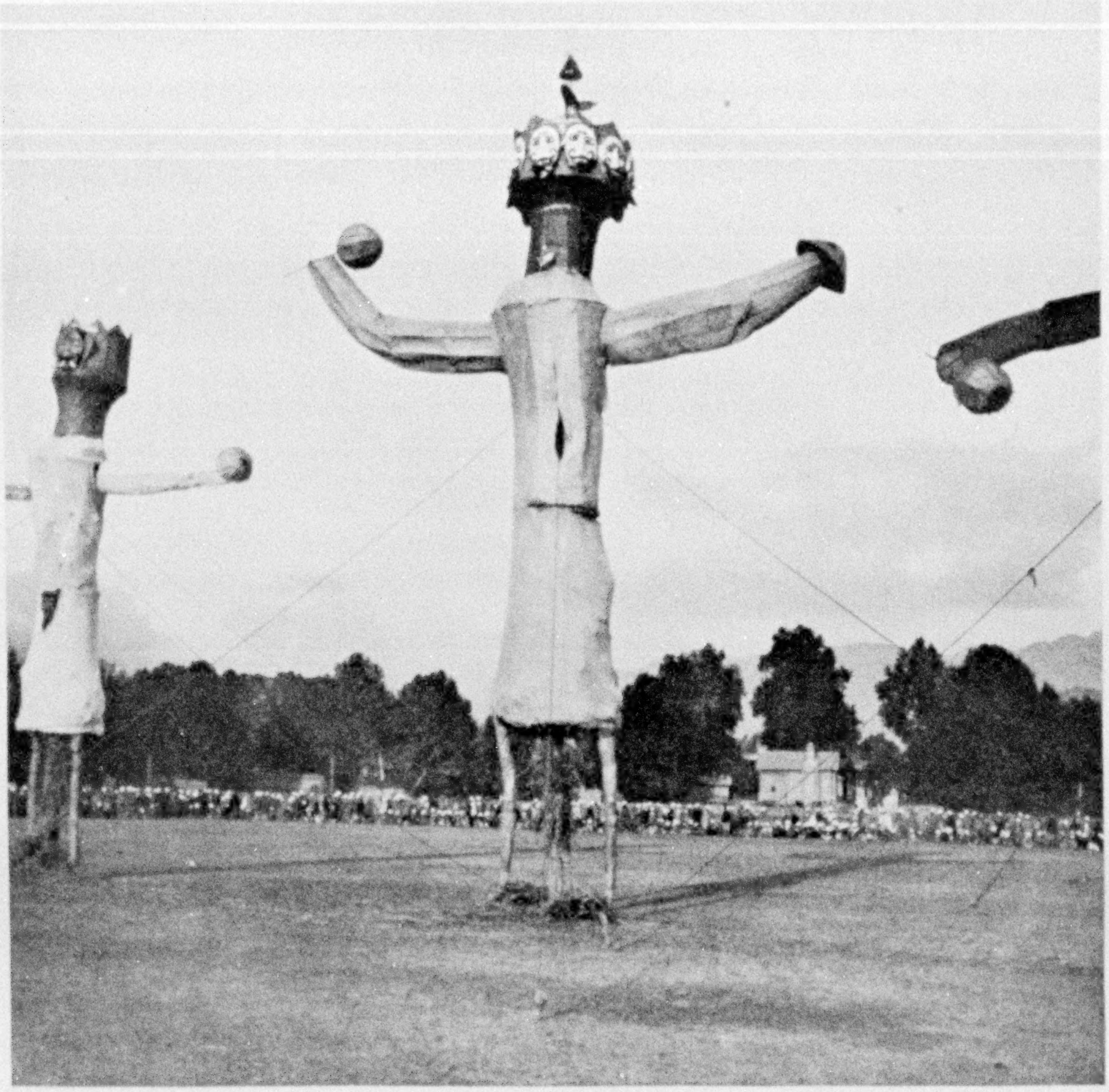
THE SILKWORM WAS A GIFT FROM CHINA TO INDIA

There is a tradition that a Chinese princess concealed mulberry-tree shoots and silkworm eggs in the lining of her headdress and smuggled them to India. In Kashmir, silkworms are farmed out. Only when the cocoons are ready to be transformed into soft, fine threads do those who have cared for them bring in the baskets, piled high with prospective income. The baskets are weighed, and each man gets a ticket showing the weight of his offering, which is later turned into rupees and annas. Most of Kashmir's silk is sent to England to be woven.



A MISTRESS OF POTS AND PANS IN KASHMIR

Her household enjoys many of the vegetables seen on Western tables, such as tomatoes, cucumbers, eggplant, turnips, and potatoes. Her pots also contain plants that are seldom eaten in other parts of the world, such as thistles, nettles, walnut catkin stalks, wild asparagus, and wild rhubarb cooked in honey.



THIS 10-HEADED DEMON KING OF CEYLON WILL GO UP IN SMOKE

Once a year in Srinagar the Hindus burn in effigy the giant god Ravana, with his brother and son. These three stole Sita, the wife of Rama, and held her captive in Ceylon. Rama and his brother hunted far and wide for her; then Hanuman, the monkey general, found out where she was. Hurling huge rocks and trees into the sea, his followers built a bridge to Ceylon, across which Rama, with an army of monkeys and bears, marched to the attack, and to the subsequent rescue of Sita. The burning in effigy of these figures recalls the helpfulness of Hanuman and is accompanied with much religious fervor. The passageway the monkey built for Rama across the straits—the so-called Adam's Bridge—is still known in India as Rama's Bridge.

made a convenient pincushion, and there were generally long, varicolored threads hanging down before his eyes.

Dear, patient, fine-sewing dhurzi, I wish I had you squatting cross-legged on my premises now! I would not then be paying exorbitant prices for indifferent work.

THE HEAD BOATMAN MANAGES EVERYTHING

Aziza was an English-speaking lad of pleasing manners and appearance. Everyone said, "You must watch your khitmatgar. He does all your marketing and he will cheat you surely." Did you, Aziza, here and there? But you were a wonderful joy to me, and, though I am sorry if you were not strictly honest, how can I grudge a few annas to one who gave so much in return?

If we took guests for tea to Shalimar Gardens, it was Aziza who went along and served a perfect meal under the spreading chenar trees. When I planned a morning in the bazaars, Aziza followed respectfully behind, my guide, translator, and willing slave. My days were carpeted with ease and my floating home was a joy to me, thanks to the willing service of Aziza.

Where but in Kashmir could one call back, as one was leaving home for all day, "Aziza, we will have guests for dinner to-night at 9 o'clock," and return to find everything in perfect order, fresh flowers everywhere, the table set in holiday attire, and a course dinner perfectly planned?

We had such fun over our festive table settings. Aziza had once seen a table decorated for a party at the Rajah's, and he used the main motif, with variations of his own, whenever special occasion called. Intricate floral designs, with appropriate mottoes, were picked out in dyed rice, and tinsel leaves, cut out, I am sure, of the silver paper that came around the cigarettes, added a final glitter.

We had birthday mottoes, anniversary greetings, and good wishes; the lad searched his brain to carry out his pet scheme of decoration. He struck a fantastic zenith, however, one evening when we were having guests and I returned home with only time to dress and take a hurried look at the table. Before my own place, done in colored rice, sprawled a huge fish. Before Sahib's an unmistakable whisky bottle, trickling a small brown stream into a tiny glass. Real flowers graced the center of the table, but around them, in a circle, he had traced his ricy motto, "Well done!"

How banal I could become with my talk of household matters and of servants, but never was there such a household and never were such childlike servants!

WOMEN OF KASHMIR ARE NOTED FOR LOVELY EYES

Many of the Kashmiris are fine looking, the women especially having beautiful eyes and quite regular features. Like other native States of the Indian Empire, Kashmir has an English resident, or advisory official, and through him more sanitary ways of living are gradually being introduced into the country. There is an excellent mission hospital and a zenana hospital, as the name implies, for women, and a school conducted by an English clergyman is doing wonders among the youth of the country.*

The foreign element in Srinagar increases yearly. From the terrible heat of the Punjab come English Army people, seeking the cool air and health of the hills, and these bring with them the influence of English manners and customs, and, better still, of English fair play. There is not in all Srinagar a merchant who does not rely whole-heartedly on the honor of the English Sahib.

SHOPPING IN THE CITY OF THE SUN

Shopping is a quaint pastime in this City of the Sun. As one strolls along the Bund, eager merchants press their wares. Mohamad Jhan assures you that not in all Srinagar—no, not even at Ali Jhan's, his rival—can you procure such embroideries, such fine pashmina, such beautiful designs. Will not the Lady Sahib but see?

Or, as the small shikara of Habib Joo is rowed alongside your boat, deftly timed to find you at home, the turbaned "box wallah" eagerly spreads his wares. He is insistent that you see his treasures. "Only looking, Lady Sahib. Not buying, only looking." The foxy wallah well knows his goods are tempting. He is sure that some time you will buy.

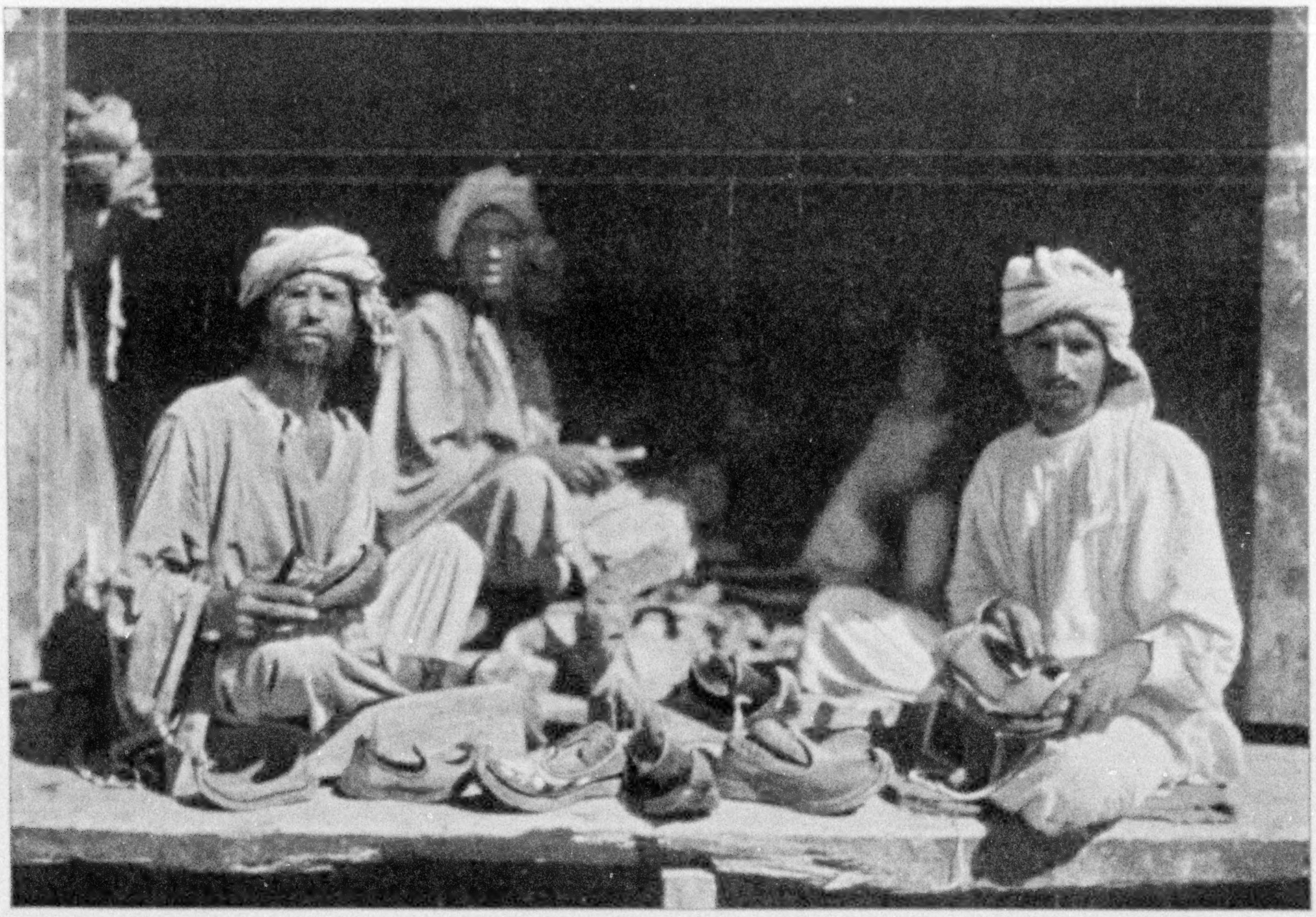
The native industries of Kashmir, alas, have cheapened and some have almost died out entirely. No longer, for instance, can one procure the very finest shawls, such as made the name of Kashmir famed throughout the world. One can get good shawls, soft and fine, but the exquisite, old-time shawls are hardly to be found outside of museums.

Pashmina is one of the loveliest products of the land. It is a soft cream-colored woolen cloth, made from the fine under-hair of the Tibetan goat. The finer weaves are incredibly soft and the shawl-maker, hopeful for your order, will show you how a length of it can be drawn through a finger ring (see page 440).

A much heavier woolen cloth, something akin to Scottish homespun, is called puttoo, and the better weaves make splendid outing clothes.

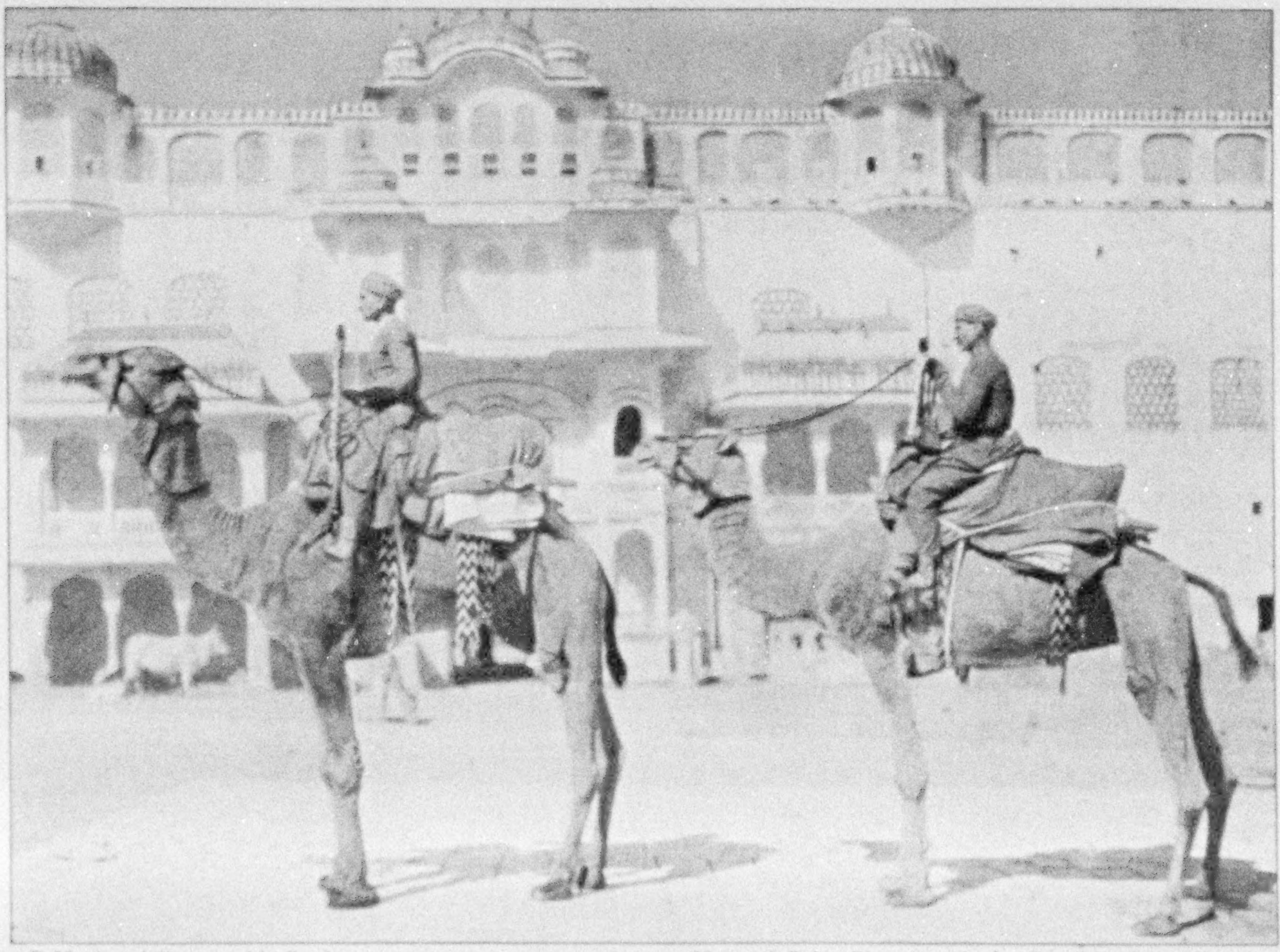
---

* See "Outwitting the Water Demons of Kashmir," by Maurice Pratt Dunlap, in the National Geographic Magazine for November, 1921.



AT DARYA KHAN EACH SHOEMAKER STICKS TO HIS LAST

Footgear with turned-up toes, hobnailed soles, and occasionally fancy tops are popular in this town of the western Punjab. The chief cobbler affects nose glasses.



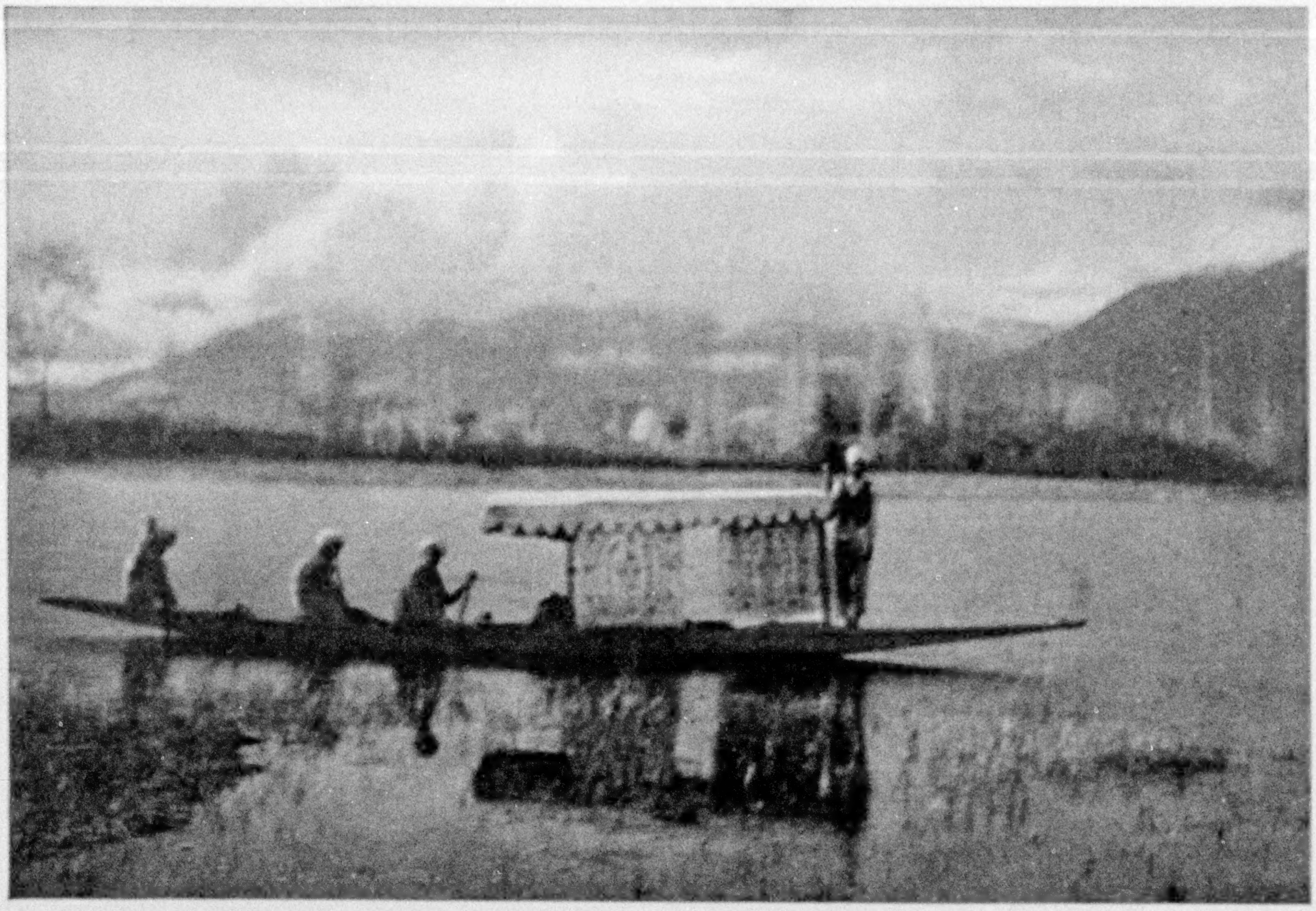
© National Geographic Society

Natural-Color Photographs by Franklin Price Knott

FROM THE ROYAL STABLES OF JAIPUR

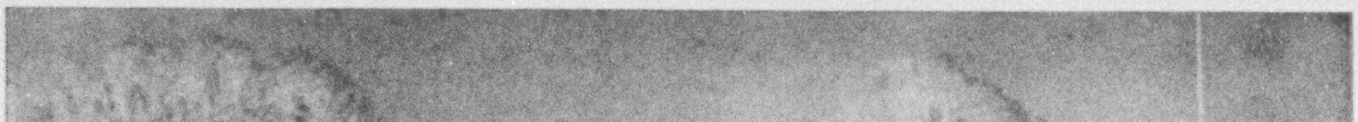
Except for their grumbling, these carefully groomed animals are a far cry from "the commissariat camel and 'is commissariat load" immortalized in "Oonts," Kipling's ballad of the Northern India Transport Train.

XUM



DAL LAKE, NEAR SRINAGAR, MIRRORS NATURE'S GIFTS TO KASHMIR

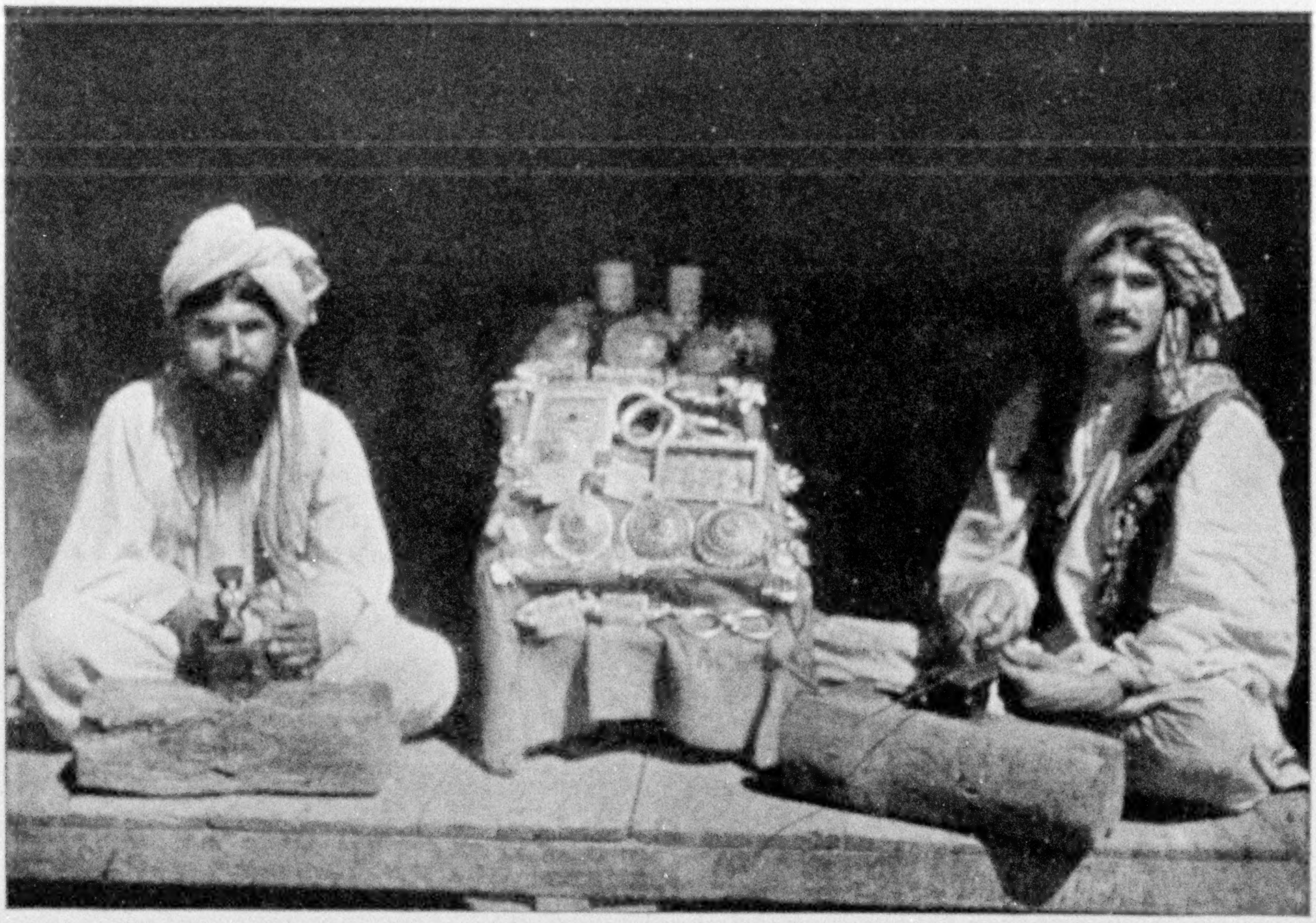
"Place of delight" for the tired man, and "solitary sojourn" for the recluse—so Akbar's historian describes this entrancing sheet of water. The boat is a *shikara*, the gondola of the East.



© National Geographic Society Natural-Color Photographs by Franklin Price Knott

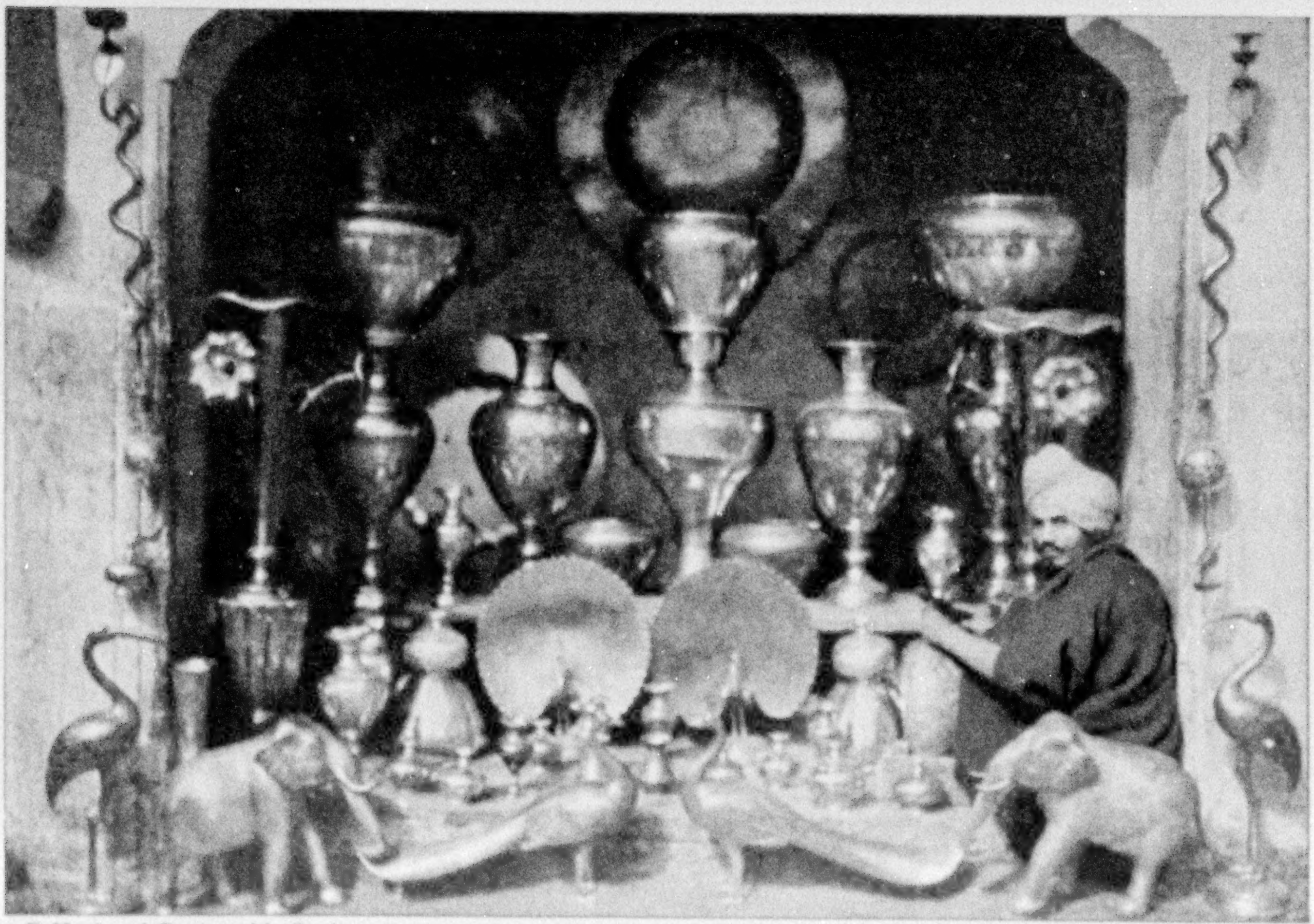
THIS CRAFT OF STATE MOVES TO THE MUSIC OF HEART-SHAPED PADDLES

Every spring the Maharaja of Jammu and Kashmir comes to his summer palace at Srinagar, and the Jhelum River scintillates with color and crowds. The British representative and his staff, and native State officials, go down the river below the city to meet him.



JEWELERS OF DARYA KHAN REVEAL SECRETS OF THEIR CRAFT

This is a fairly large Punjab village (see also Color Plates IX and XII), and, being near forbidden Afghanistan, is one of the best places in India to see Afghan types.

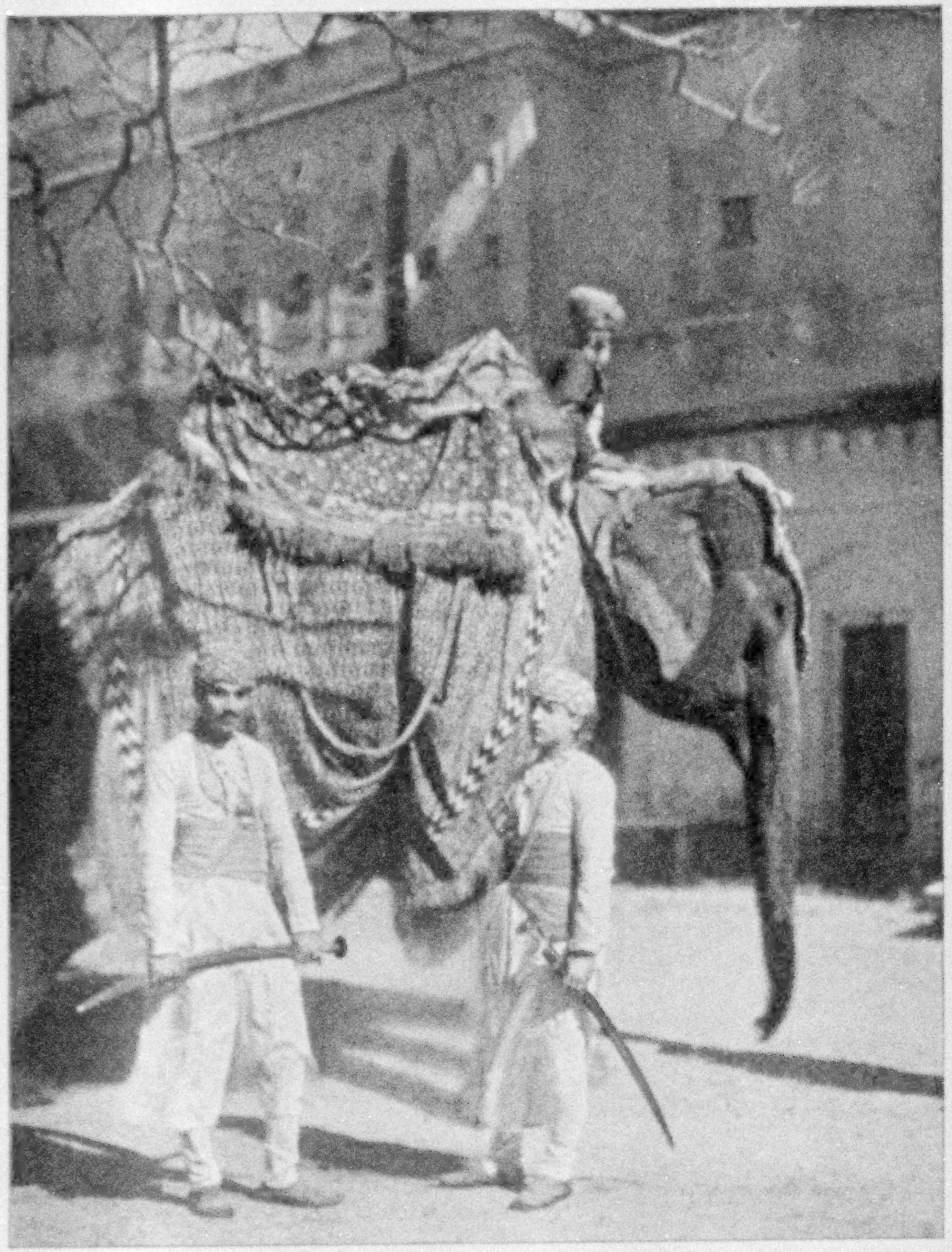


© National Geographic Society

Natural-Color Photographs by Franklin Price Knott

A JAIPUR BRASS-SMITH SHOWS THE VERSATILITY OF HIS ART

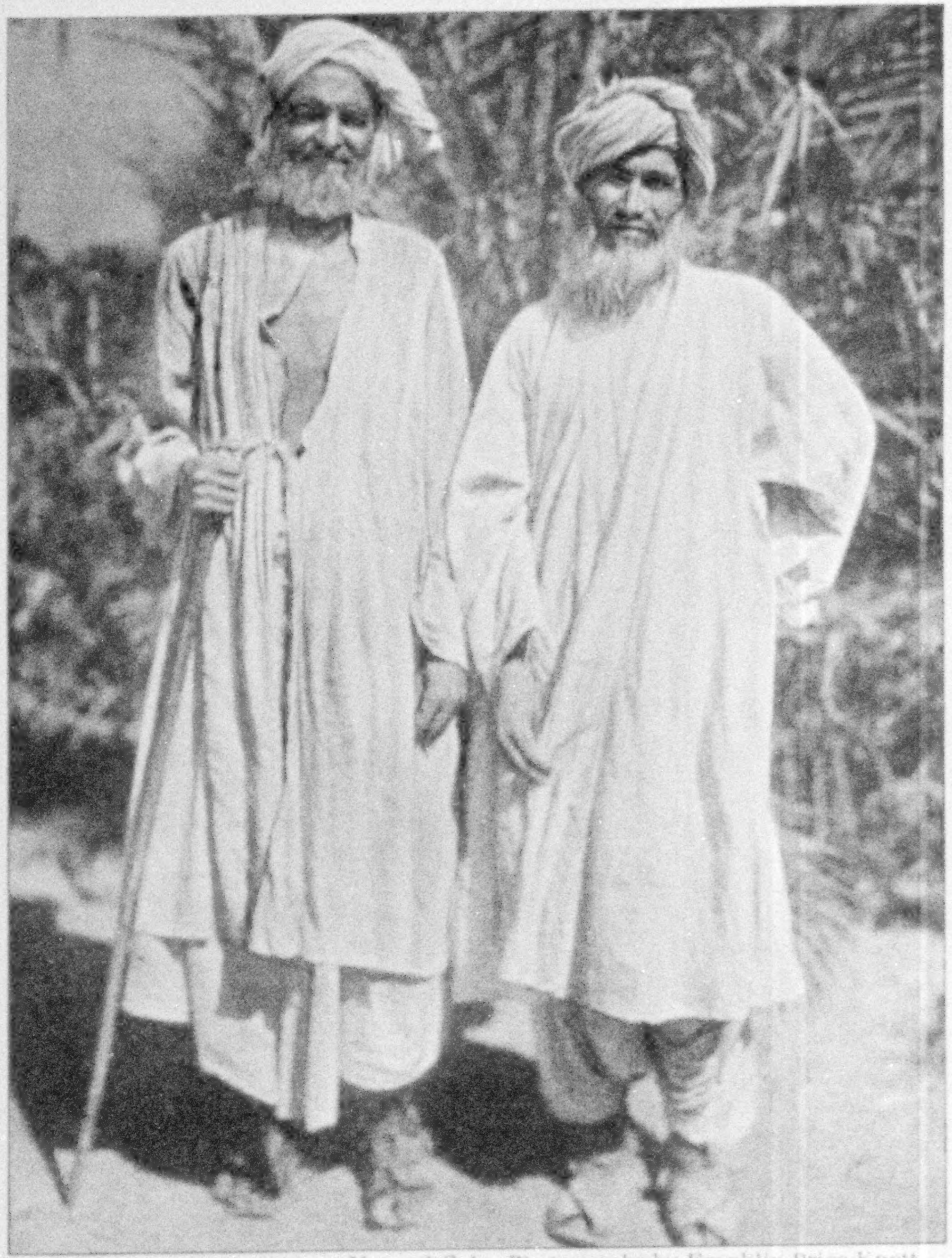
Evening is the best time to study the street life of this pink stuccoed capital. After the heat of the day is past, merchants open their booths along the main street and spread their wares—brass, shoes, textiles, or what not—on the pavement.



© National Geographic Society

"MOVIES" INVADE JAIPUR'S ANCIENT CAPITAL

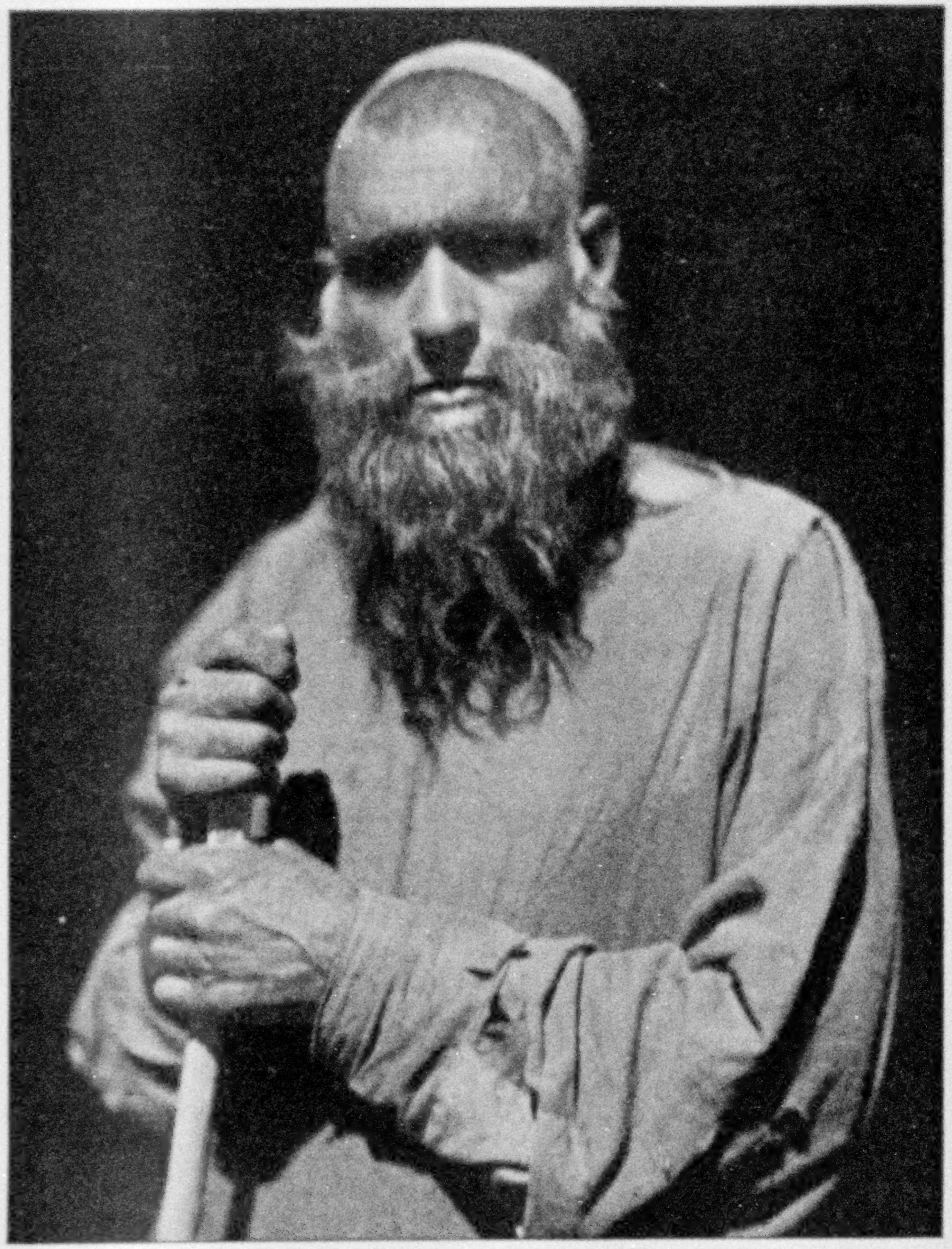
The men are screen actors who took part in a picture filmed at ruined Amber, once a magnificent city before a rajah moved the capital down to the plains. The elephant's usual task is to convey travelers from Amber city in the valley up a steep hill to the palace.



Natural-Color Photographs by Franklin Price Knott

HENNAED BEARDS PROCLAIM THEM MECCA PILGRIMS

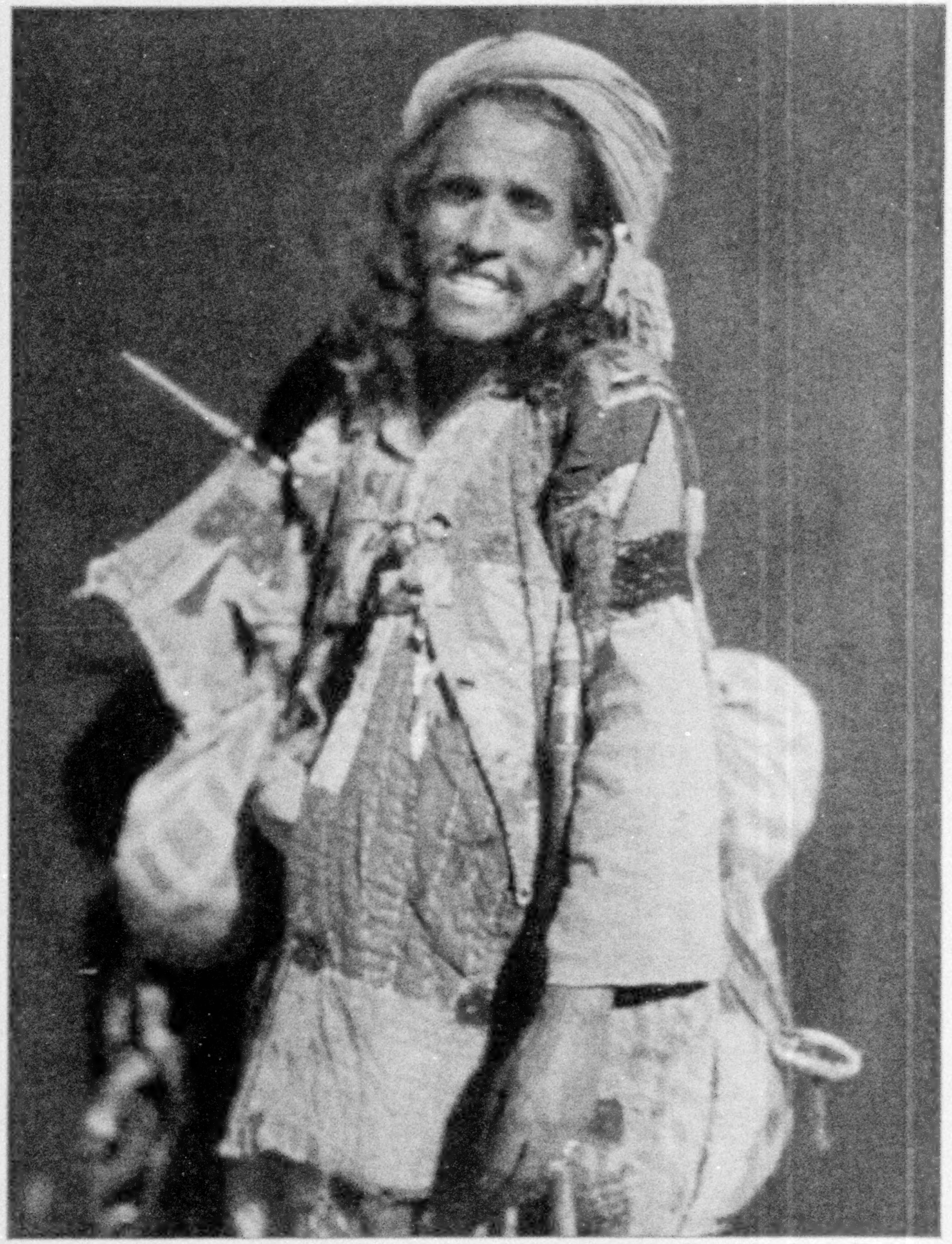
But when the photographer saw so many dyed whiskers that could not have afforded the expense of such a long journey, and a white pony with his tail hennaed, he doubted some of these pious claims. Taken at a fair in Darya Khan.



© National Geographic Society

THE FINEST SUBJECT IN THE "WHISKERED" COUNTRY

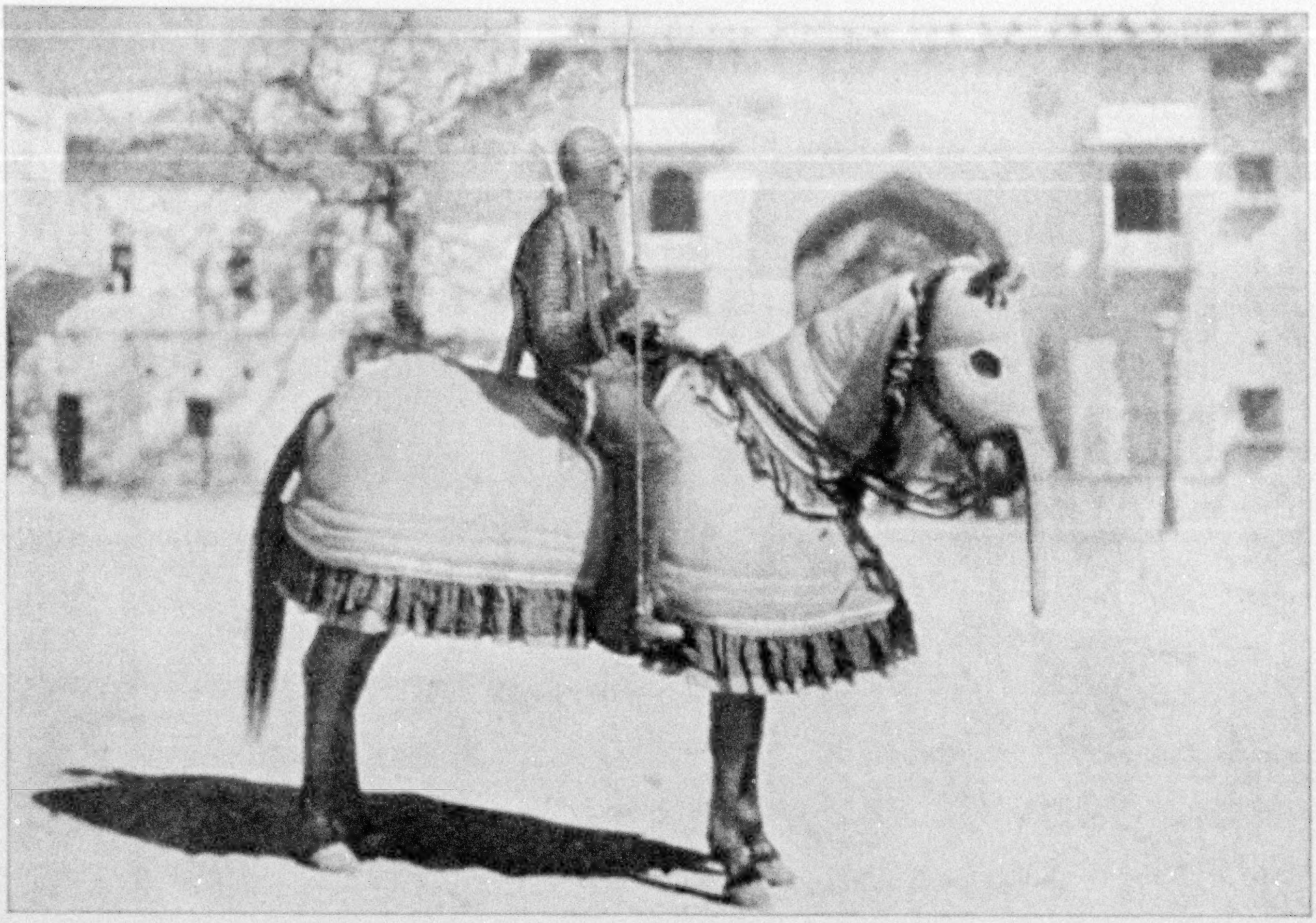
The Afridi, a gaunt-faced, athletic highlander (see also Color Plates VI and VII), has an evil name for ferocity and treachery, but those who know him say that when his inbred distrust of all mankind is overcome, he is kindly and devoted.



Natural-Color Photographs by Franklin Price Knott

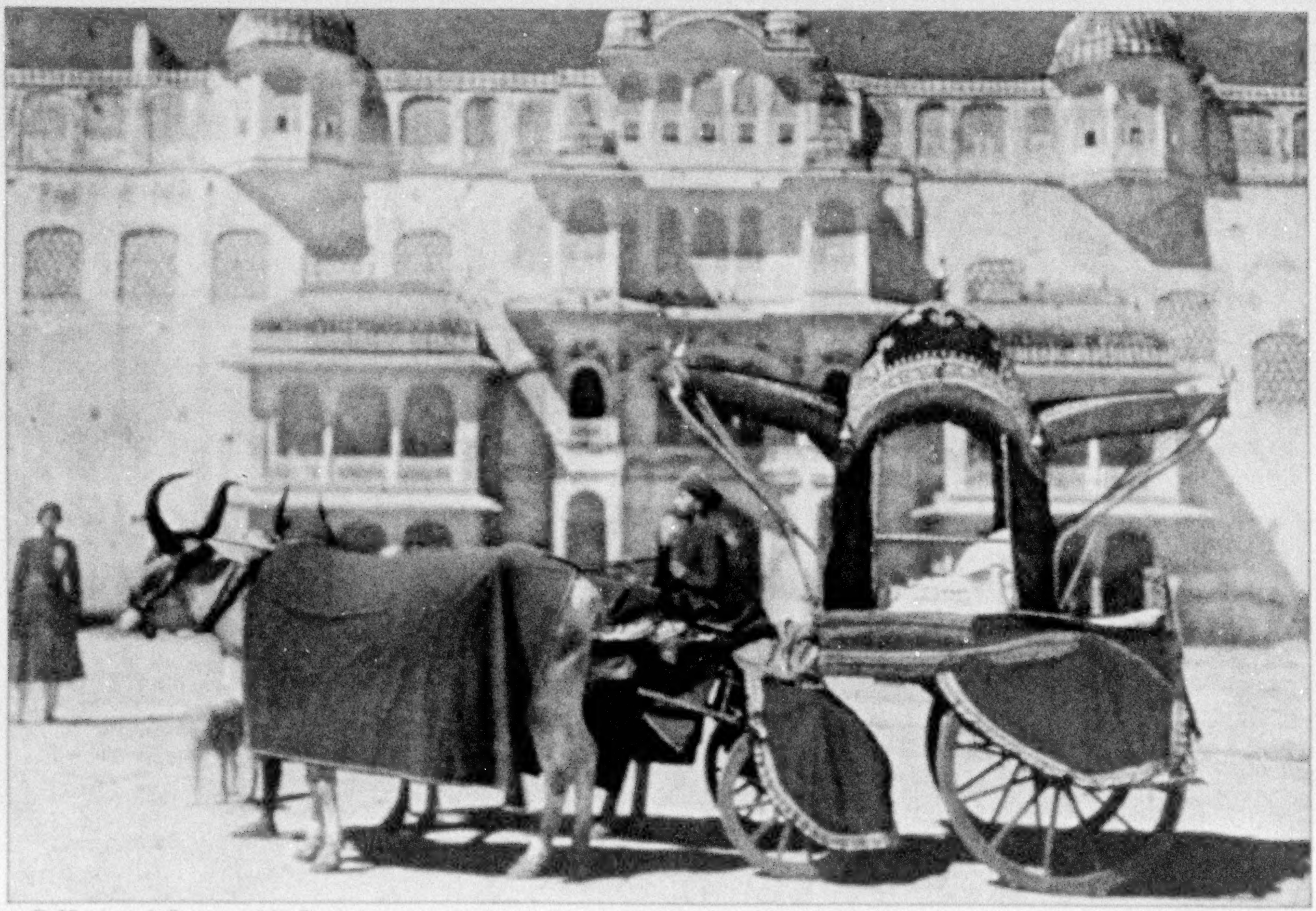
THOUGH CLAD IN RAGS, HE SMILES AT LIFE

Beggary is an art throughout the East, most of its devotees being professionals. They exist in such large numbers because many oriental people think that alms-giving is meritorious. This beggar plies his trade at Dera Ismail Khan, in the North West Frontier Province.



HIS SOLDIER FORBEARS DRESSED LIKE THIS IN MEDIEVAL DAYS

Helmed with steel, chain mail incasing his body, and thick, padded coverings protecting his steed, the warrior is ready for a tournament at Jaipur.

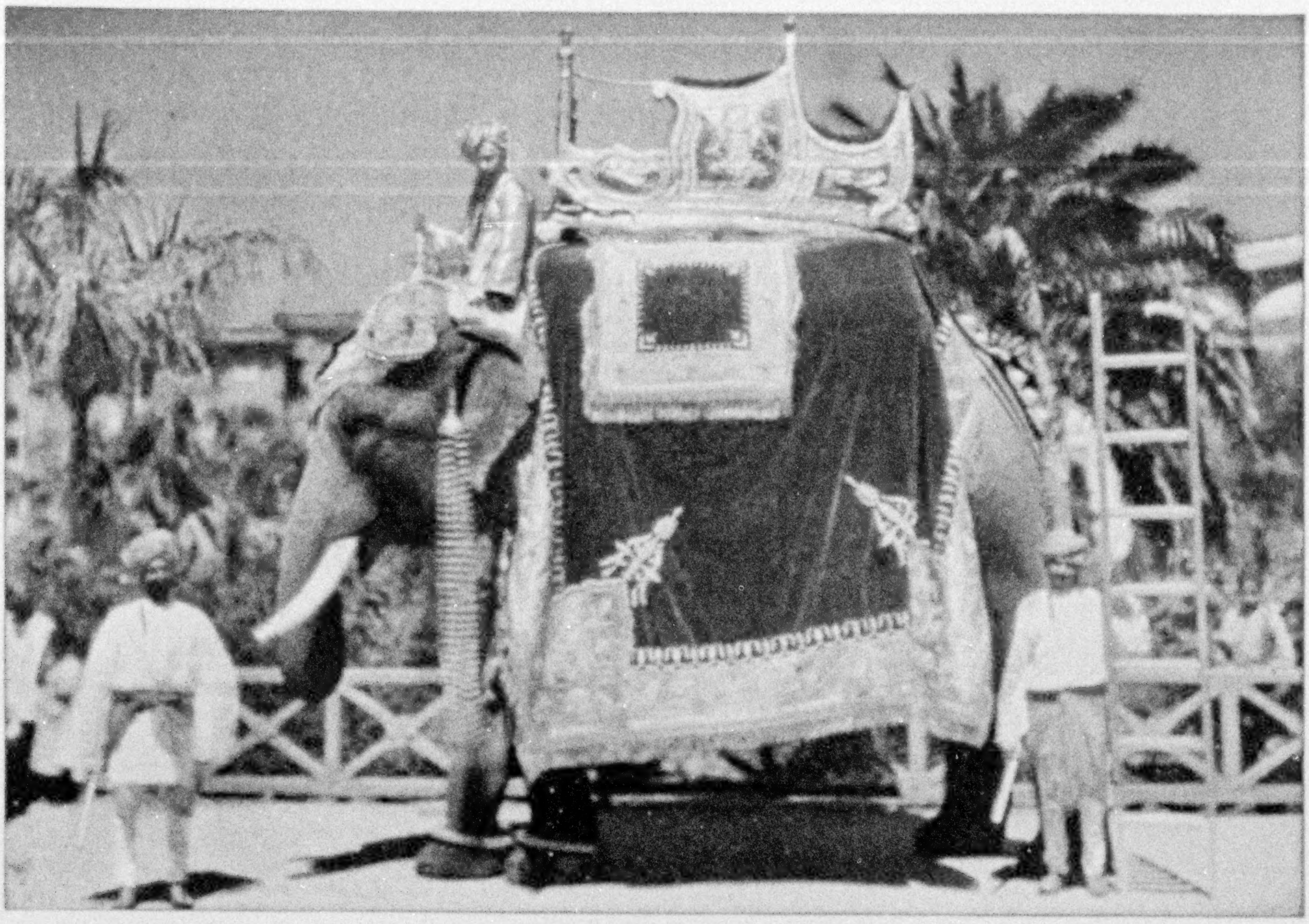


© National Geographic Society

Natural-Color Photographs by Franklin Price Knott

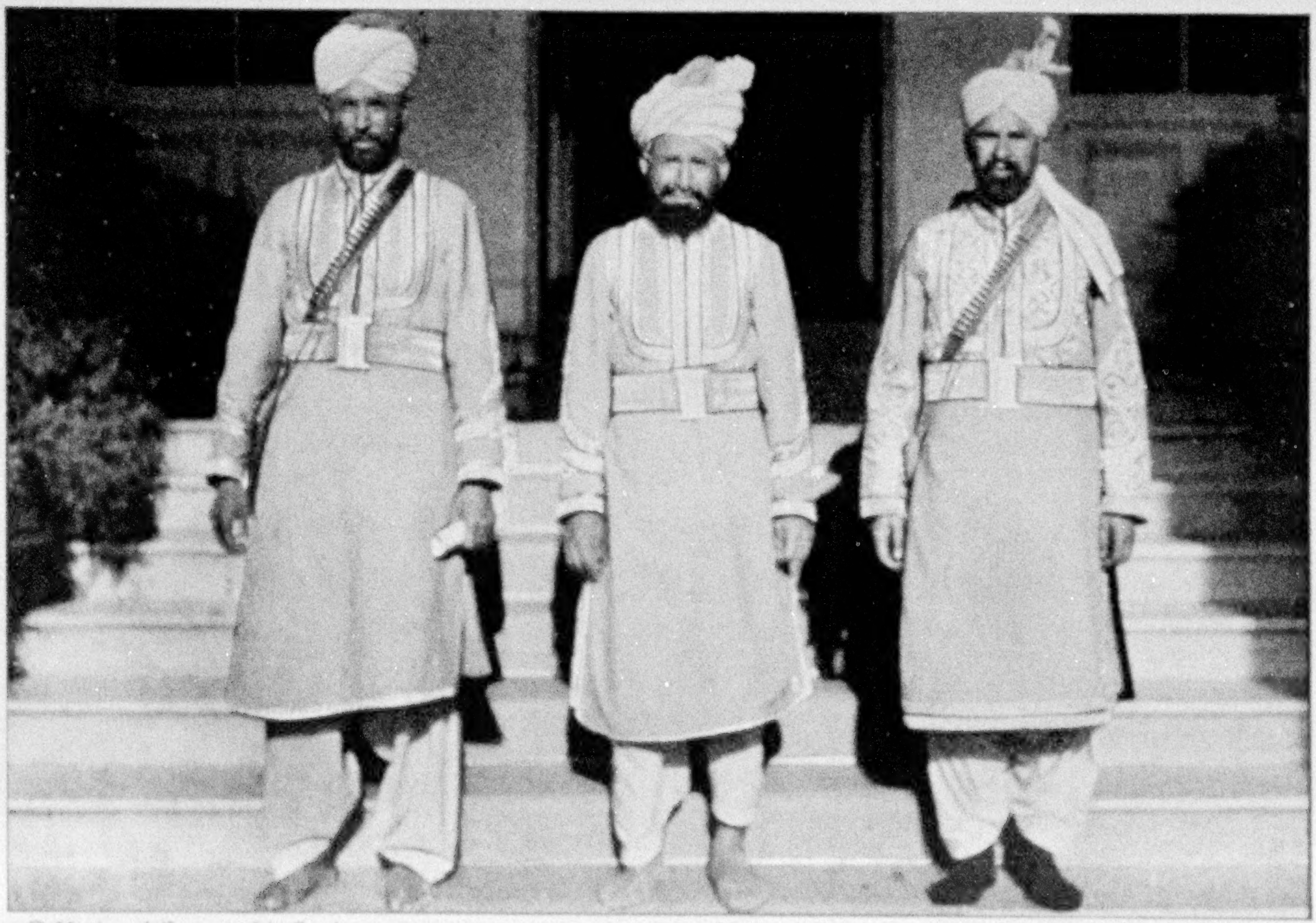
VELVET MUD GUARDS, A BADGE OF REGAL OWNERSHIP

No one may use this bullock cart except on State occasions. It stands before the Maharaja's palace at Jaipur.



THE ROYAL ELEPHANT'S TOILET IS A LENGTHY AFFAIR

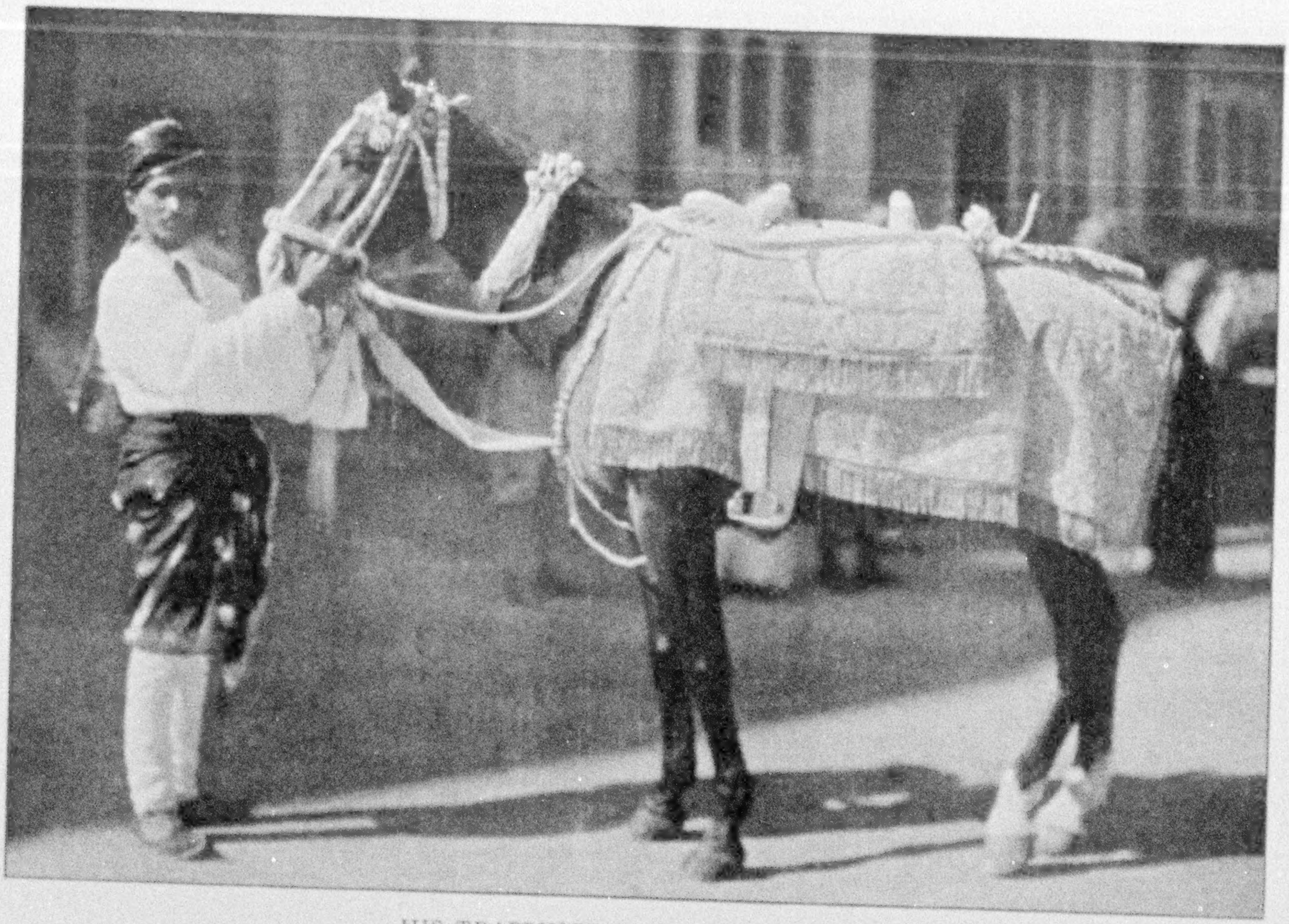
The great beast is scrubbed and manicured before he is bedecked and the glittering, cumbersome howdah is put in place.



© National Geographic Society Natural-Color Photographs by Franklin Price Knott

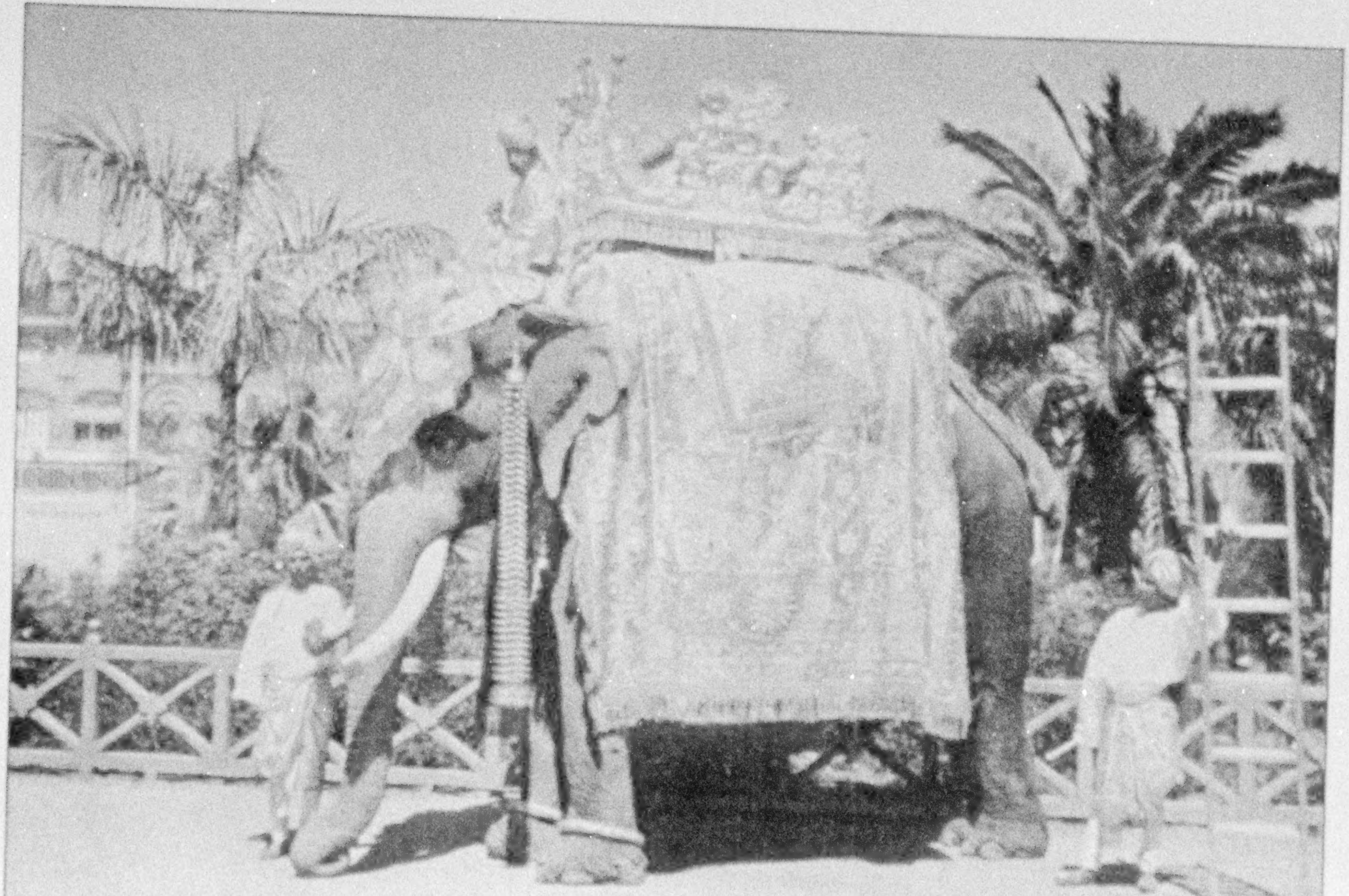
THEY GUARD THE COMMISSIONER'S PALACE AT PESHAWAR

The capital of the North West Frontier Province has been under British rule since 1849. It is eleven miles from the entrance to Khyber Pass.



HIS TRAPPINGS ARE WORTH $100,000

One of the many ponies owned by the Maharaja of Jammu and Kashmir.



© National Geographic Society
Natural-Color Photographs by Franklin Price Knott

"THE POOR HAVE NO FRIENDS, BUT ELEPHANTS WAIT AT THE RICH MAN'S DOOR"

So runs an Indian proverb. A royal elephant of Jaipur wearing long gleaming earrings and anklets. The tusks have been squared off and bound in brass. The ladder aids in mounting to the howdah.

A few of the papier-mâché merchants have very good work for sale, and wood-carving is one of the arts of the valley; but it is difficult to get properly seasoned wood which will not warp. It is a pity, for the carving is a matter of endless labor and is often very lovely.

KASHMIR'S TWO INDUSTRIES—CARPET-WEAVING AND SILK-RAISING

Two large industries have been developed through the aid of English capital. These are carpet-weaving and silk-raising. Not much of the silk is woven into cloth in Kashmir, but the worms are bred and the cocoons worked into soft, yellow skeins, which are usually shipped to England to be turned into fabrics. Both of these factories use modern machinery and methods and employ a large number of native hands.

The small stalls in the native bazaars are generally amusing and full of local color. Squat, cross-legged figures sew or weave, or hammer at their metal wares. Idlers stand or sit about, puffing at a neighborly hubble-bubble.

Strident bargaining goes on at length. The Kashmiri is not quarrelsome with his fists, but he indulges in endless warfare with his tongue. Now and then the ghostlike figure of a Mohammedan purdah woman slips quietly through the crowd. She is swathed from head to foot in a voluminous *burka,* her face covering having only latticed openings through which she may dimly see but not be seen.

Children, half clothed or not at all, tumble and play underfoot, and pariah dogs sleep undisturbed in the sun. Now and then a tonga clangs its noisy way through the twisty streets or the raucous horn of an automobile is heard.

LIKE THE TAJ MAHAL, THE SHALIMAR GARDENS ARE A MEMORIAL

There are delightful excursions to be made around Srinagar. A favorite one, of course, is to Shalimar Gardens. Paddled by the three little boat boys, our shikara used to glide through the waters via the canal which connects the River Jhelum with Dal Lake.

Across this shadow-bordered lake, with its clear, cool water, and in about an hour, we were at the entrance to Shalimar, the lovely Persian Garden, laid out and made beautiful by the Mogul Emperor Jahangir for his beloved wife, Nur Mahal. It is a spot of perfect beauty.

Clear waters from the lofty mountains back of the garden have been trained to flow over a series of steps. Terraced lawns and flower beds of gorgeous colors delight the eye. Chenar trees cast a grateful shade where one may sit at ease watching the fountains play and the gaily dressed people who come on Sundays and on holidays.

A pavilion of black marble, brought all the way from Delhi, stands at the upper end of the garden, the water flowing both under and around it. In imagination one can picture this garden in the time of the lovely Nur Mahal, people it with dancing girls and slaves, and fancy one hears the quaint music of another day. It must have been a scene of exotic loveliness. There are other formal gardens around Srinagar—Nishat Bagh, Nasim Bagh—but to me Shalimar is the wonder of them all (see illustration, page 439).

GARDENS BUILT ON RAFTS

I had heard of the floating gardens in Dal Lake and was anxious to see them. It seems that, in a country where many of the people are too poor to own land, the peasant has hit upon a clever scheme. With long-handled tongs he drags mud from the bottom of the lake. This he mixes with twigs to hold it together and dries in lumps, possibly a foot in diameter. When he has accumulated enough of these, he binds them together with many reeds and makes of them a sort of raft. Into each round mass of dried mud he puts his seeds, and so raises such vegetables as he may need (see page 447).

Melons, cucumbers, tomatoes, and the small, purplish *brinjal,* which is a dwarf edition of our eggplant, all grow luxuriantly in these novel garden plots, drawing their moisture from the waters on which they float.

A friend of mine told of finding one morning after a storm a large expanse of bobbing land outside her house-boat windows. As she looked her amazement, an excited and very voluble Kashmiri

A LONG DAY'S LABOR FOR A BOATLOAD OF WOOD

Yet the old man feels well repaid. Wood is the sole fuel of Kashmir, and each house boat is limited to so many maunds a month, a maund being 82-2/7 pounds.

SORTING COCOONS IN THE STATE SILK FACTORY AT SRINAGAR

The work is usually done by women and young girls (see, also, Color Plate VIII and illustrations, pages 448 and 449).

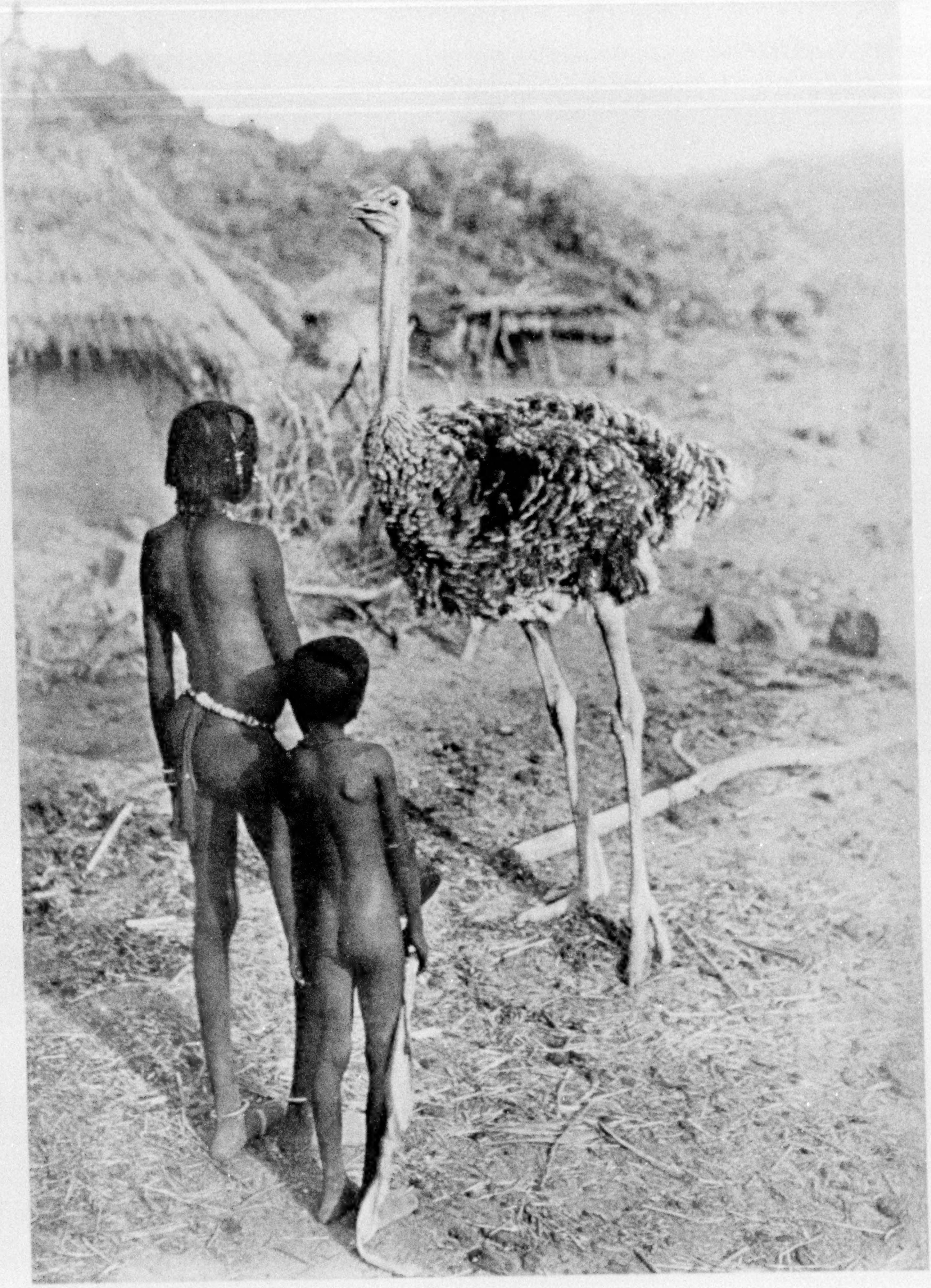
MANY ROADS THROUGH THE VALE OF KASHMIR ARE LINED WITH POPLARS

Part of a 35-mile stretch from Baramula to Srinagar, which has scarcely a break in its shady border. Baramula is not only Kashmir's river port, but the gateway to the Vale.

appeared in a dugout and, attaching a rope to some roots, paddled furiously away, his rescued truck garden trailing along behind him.

Dal Lake is always beautiful, but in August, when the lotus is in bloom, it is probably at its best. The green pads of this sacred flower of the Hindus and Buddhists cover large areas, and the blossoms, delicately pink, rise above the leaves, swaying as the waters rise and fall. The Maharaja sends his servants with great baskets daily and has large numbers cut for his own personal use.

It is hard to write adequately of the Vale of Kashmir. Snow-capped mountains stand reflected in the cool, clear lakes. Chenar trees, poplars, and silver spruce spread their shade above the greenest sward. Fragrant flowers of many hues are everywhere. There is such a wealth of Nature's gifts that one can well understand how it has come to be called "The Happy Valley."



A PET OSTRICH HAS THE RUN OF A NUBA VILLAGE

The Nubas, living to the south of Abu Zabad, are one of the wildest tribes of the Sudan. For many years they were in constant dread of raids from the powerful and warlike Messeria, whose practice it was to kill all men who resisted and to carry off the others as slaves (see text, page 467).

TWO FIGHTING TRIBES OF THE SUDAN

BY MERIAN C. COOPER; PHOTOGRAPHS BY ERNEST B. SCHOEDSACK

CO-AUTHORS OF "THE WARFARE OF THE JUNGLE FOLK," IN THE NATIONAL GEOGRAPHIC MAGAZINE

IT IS not so long ago—indeed, President Hoover had already reached manhood and had become a mining engineer and ex-President Coolidge was an active young lawyer—since a great section of North Africa, the Sudan, was cut off from all civilized mankind. To the Western World, what was taking place within the wide borders of this land was almost unknown. All that men knew was that somewhere in the heart of these vast sweeps of desert ruled the Mahdi's successor, a savage, fanatical warrior leader called the Khalifa, who had declared war against all the enemies of his faith.

And behind the Khalifa to battle rode the great fighting tribes of the Sudan, men almost unequaled in modern history for sheer brute fighting courage; almost unequaled for savagery also; for they made a shambles of the Sudan. In the seventeen years from 1882 to 1899 more than six million people are said to have been the victims of the dervish rule.

War, famine, disease, and more war. Life was cheap; death or mutilation was the punishment for those who even whispered disobedience to the rule of the Khalifa. He lived only for power—power absolute, the power of conquest.

"Kill! Kill!" was the order he gave to his emirs, until from the borders of the Red Sea to the great western deserts and from northern Egypt to the jungles of the upper Nile, 1,500 miles south, there raged such a storm of savage military might as even Africa had rarely known.

ALL WHITE MEN WERE SLAVES OR PRISONERS

In all this vast dervish empire were only a half dozen or so white men, and these men were slaves and prisoners. All that the civilized world knew of their existence was that occasionally across the mysterious borders of the Sudan there escaped some black man bearing, at the risk of his life, a tortured plea for aid. And the nations of Europe were powerless to help these miserable prisoners, for rather than permit a "Christian dog" to enter the domain of the Khalifa a hundred thousand warriors stood ready to die.

AN AMAZING CHANGE TAKES PLACE IN 30 YEARS

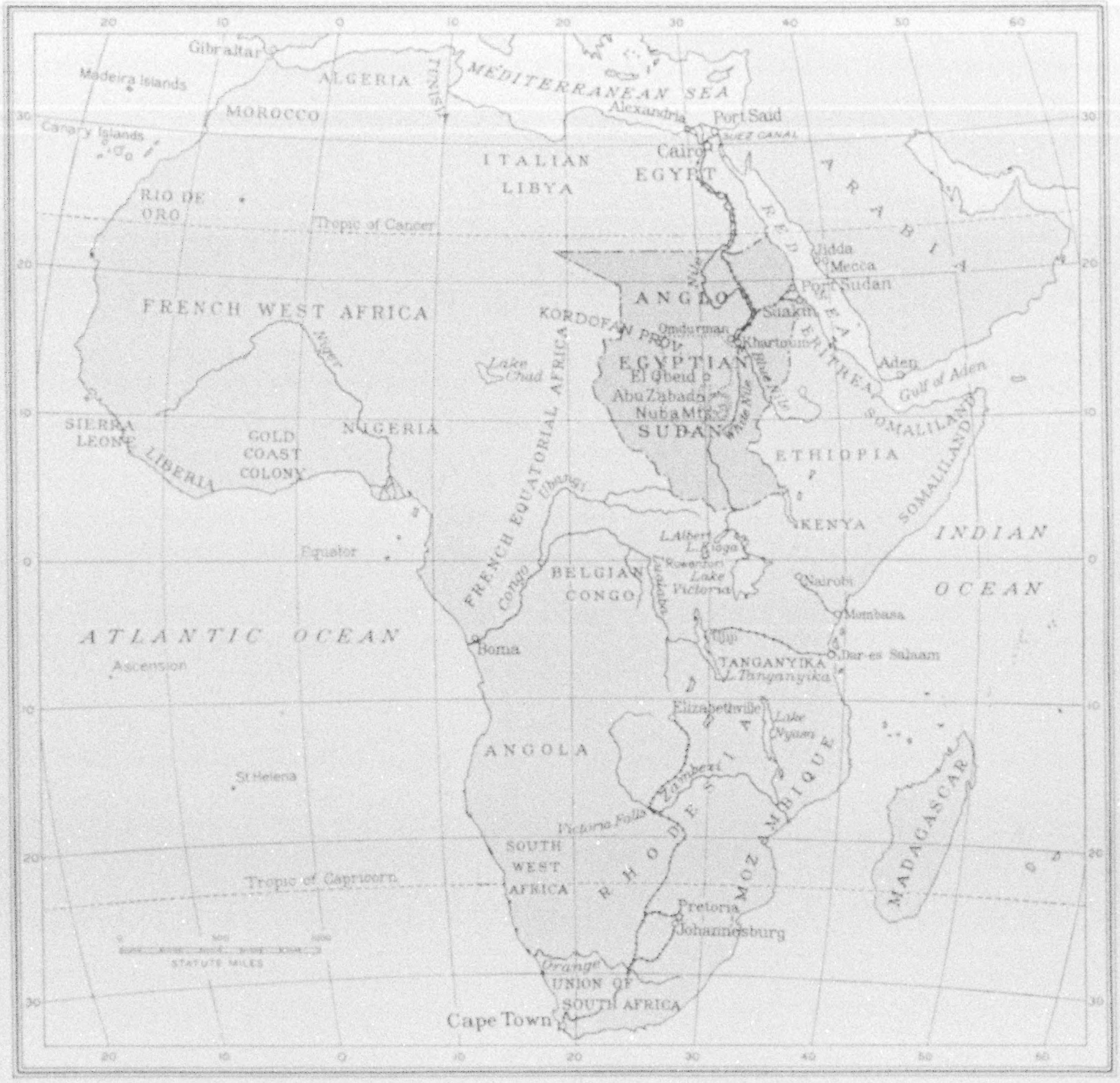
That was just a little more than thirty years ago. . . .

Yet one night, not many months ago, I sat beside a candle-lighted table, under the stars, in the open courtyard of a thatched-roofed, single-story house of a little African village. Across from me, by the dim candlelight, I could just make out the white face of a young man in his late twenties. The place was Abu Zabad, some 300 miles, as the crow flies, from the Sudan capital, Khartoum, where Gordon died on dervish spears, and more than 100 miles from the nearest whites, at El Obeid. The young man was Mr. Blackley, a Britisher, who, although he lived there alone, with only a handful of native police, was, under the title of Assistant District Commissioner, the real ruler of a huge slice of that savage, all-conquering, defiant dervish empire of thirty years ago.

This night there were present two other white men, rare visitors in this lonely spot: a young Scotch captain of the native Camel Corps, out on a 500-mile trek with his men, and a doctor. As I sat and listened to them, it was hard to realize that the millions of wild men who inhabit this great, savage Sudan are ruled to-day by a few score of just such young Englishmen as these who joked with each other so casually; and that these young Englishmen, somehow, though they lived alone and practically unprotected, were absolute masters and governors of all.

How do they manage it?

I thought: First came Kitchener's great march—the complete defeat of the dervish army near Omdurman. Then, after this, came the British administrators. Courage, unshaken belief in their race and their caste, and rigid, absolute, unswerving, impeccable justice have given to these administrators this mastery over the war-


Gibraltar
Madeira Islands
Canary Islands
ALGERIA
TUNISIA
MEDITERRANEAN SEA
MOROCCO
Alexandria
Port Said
SUEZ CANAL
Cairo
ITALIAN LIBYA
EGYPT
RIO DE ORO
Tropic of Cancer
ARABIA
RED SEA
Jidda
Mecca
Port Sudan
Suakin
ANGLO
EGYPTIAN
SUDAN
KORDOFAN PROV.
Omdurman
Khartoum
El Obeid
Abu Zabad
Nuba Mts.
White Nile
Blue Nile
Nile
ERITREA
Aden
Gulf of Aden
SOMALILAND
FRENCH WEST AFRICA
Niger
Lake Chad
FRENCH EQUATORIAL AFRICA
SIERRA LEONE
LIBERIA
GOLD COAST COLONY
NIGERIA
ETHIOPIA
Ubangi
KENYA
INDIAN OCEAN
L. Albert
L. Kioga
Ruwenzori
Lake Victoria
Nairobi
Mombasa
Equator
BELGIAN CONGO
Congo
Lualaba
ATLANTIC OCEAN
Boma
Ascension
TANGANYIKA
L. Tanganyika
Dar-es Salaam
Elizabethville
Lake Nyasa
ANGOLA
St Helena
Zambezi
RHODESIA
MOZAMBIQUE
MADAGASCAR
Victoria Falls
SOUTH WEST AFRICA
Tropic of Capricorn
Pretoria
Johannesburg
STATUTE MILES
Orange
UNION OF SOUTH AFRICA
Cape Town

Drawn by A. H. Bumstead

A SKETCH MAP OF AFRICA, SHOWING THE HOMES OF THE FIGHTING TRIBES OF THE SUDAN

The Messeria occupy the region to the south of Abu Zabad, in Kordofan; the Fuzzy-Wuzzies live among the hills along the Red Sea, west of Port Sudan and Suakin.

like and still fanatically religious tribes of the Sudan.

It is because of this prestige of the white race which the British administrators have established that we—Mr. and Mrs. Ernest B. Schoedsack and I—were able to live alone, without protection and without being in the slightest danger, among two of the most famous of the former fighting tribes.

A VISIT TO TWO FAMOUS HORSE AND CAMEL TRIBES

We first visited the Messeria, one of the nomad "horse tribes" of the western Sudan, and afterward the Amarar, one of the three "camel tribes" of the Red Sea Hills, immortalized by Kipling as the "Fuzzy-Wuzzies."

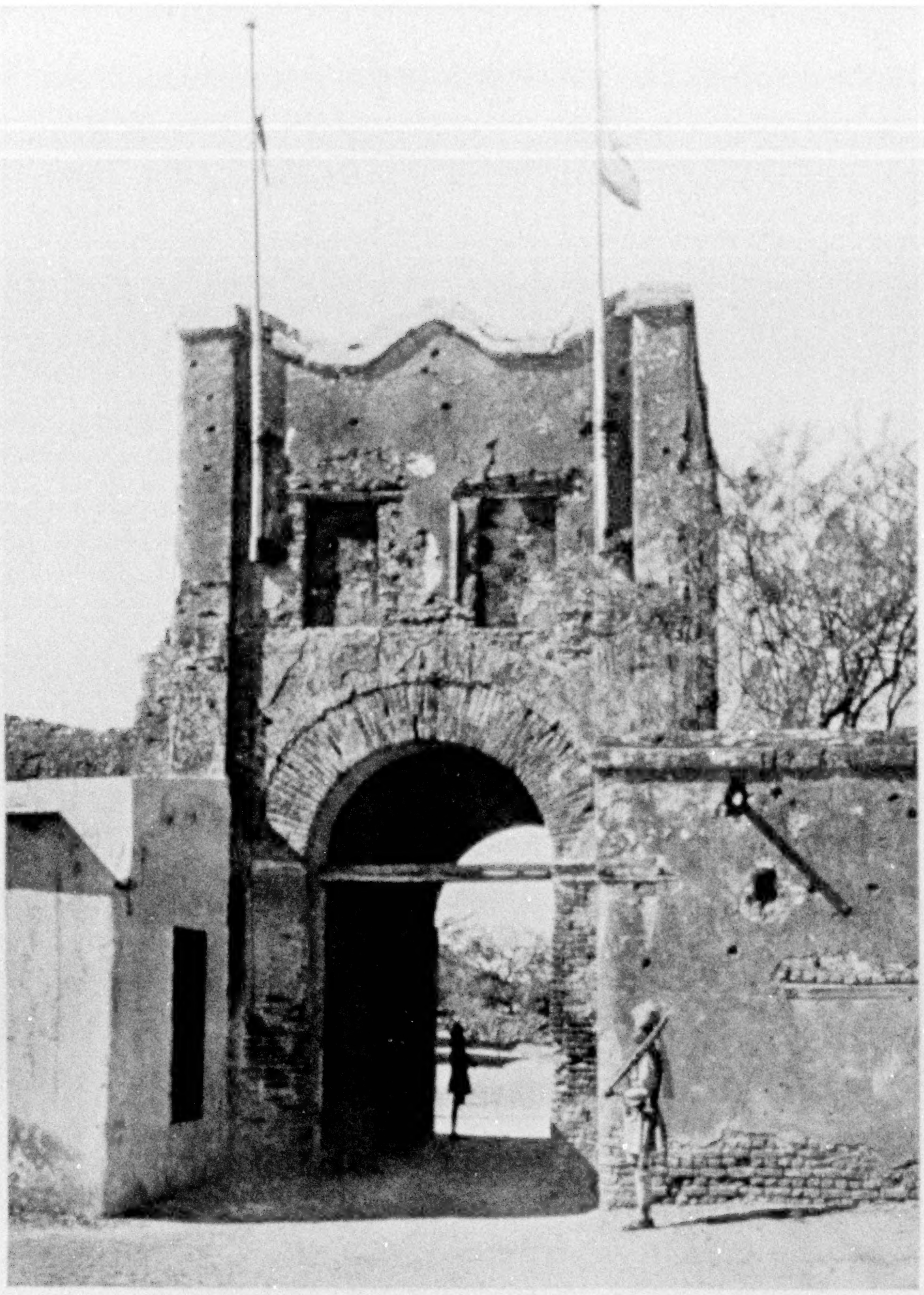
When we left El Obeid to go among the Messeria we thought of all western Kordofan as a sandy waste of desert. Indeed, in the Sudan they always speak of it as a desert. But the country between El Obeid and Abu Zabad, the tiny native village where the Assistant District Commissioner made his headquarters, was, to our surprise, covered with low forest and scrub.

Until very recently the route we took

was a long, long march by camel or on horseback, but now one can get through by motor car, and it was in this manner that we traveled.

Mr. Blackley was living in a thatch-roofed dwelling at Abu Zabad, but a small brick house had just been completed for his use, and this he lent to us. We set up our cots in the bare rooms, our cook pitched camp outside, and here we lived in great comfort while waiting for the chief of the Messeria to gather together his tribe at a place along the Nuba Mountains some 250 miles to the south.

It was pleasant in Abu Zabad. Blackley lent us horses, and in the early morning, before the heat of the day, we would ride down and watch the young Scotchman drilling his Camel Corps, then back, and in the evenings to dine by candlelight, under the stars, with the clever and witty Englishman, who had spent his day as Justice of the King's Mercy among these strange peoples.



THROUGH THIS GATEWAY AT EL OBEID SWARMED THE FOLLOWERS OF THE MAHDI

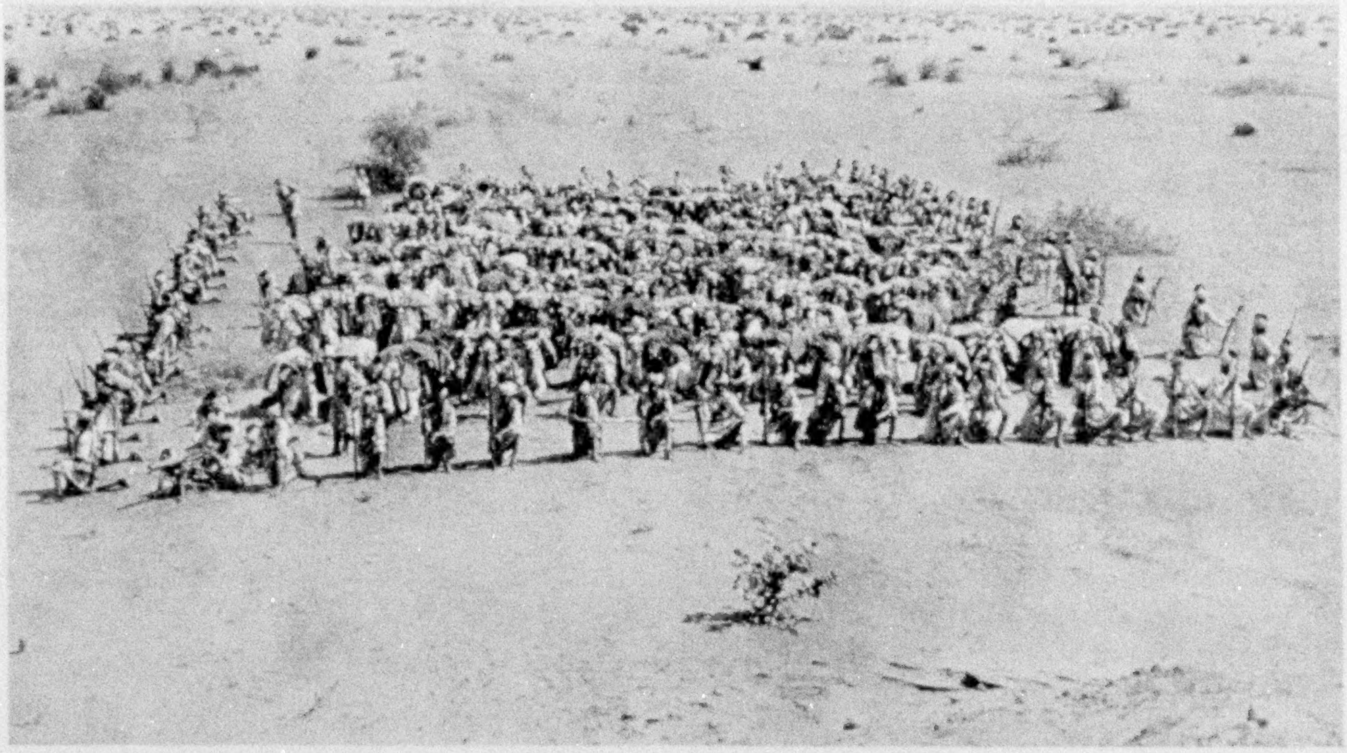
All that is left of the old wall which protected the town in the Dervish War. El Obeid is now the capital of Kordofan Province. A gum arabic market has made the town famous.

But word came that the tribe was gathering, and we were off. It took us two days of driving over a rough trail, through scrub country of the loneliest nature, almost uninhabited, before we finally pitched camp in a grove of large trees near the hills.

A NAZIR GIVES A SHOW

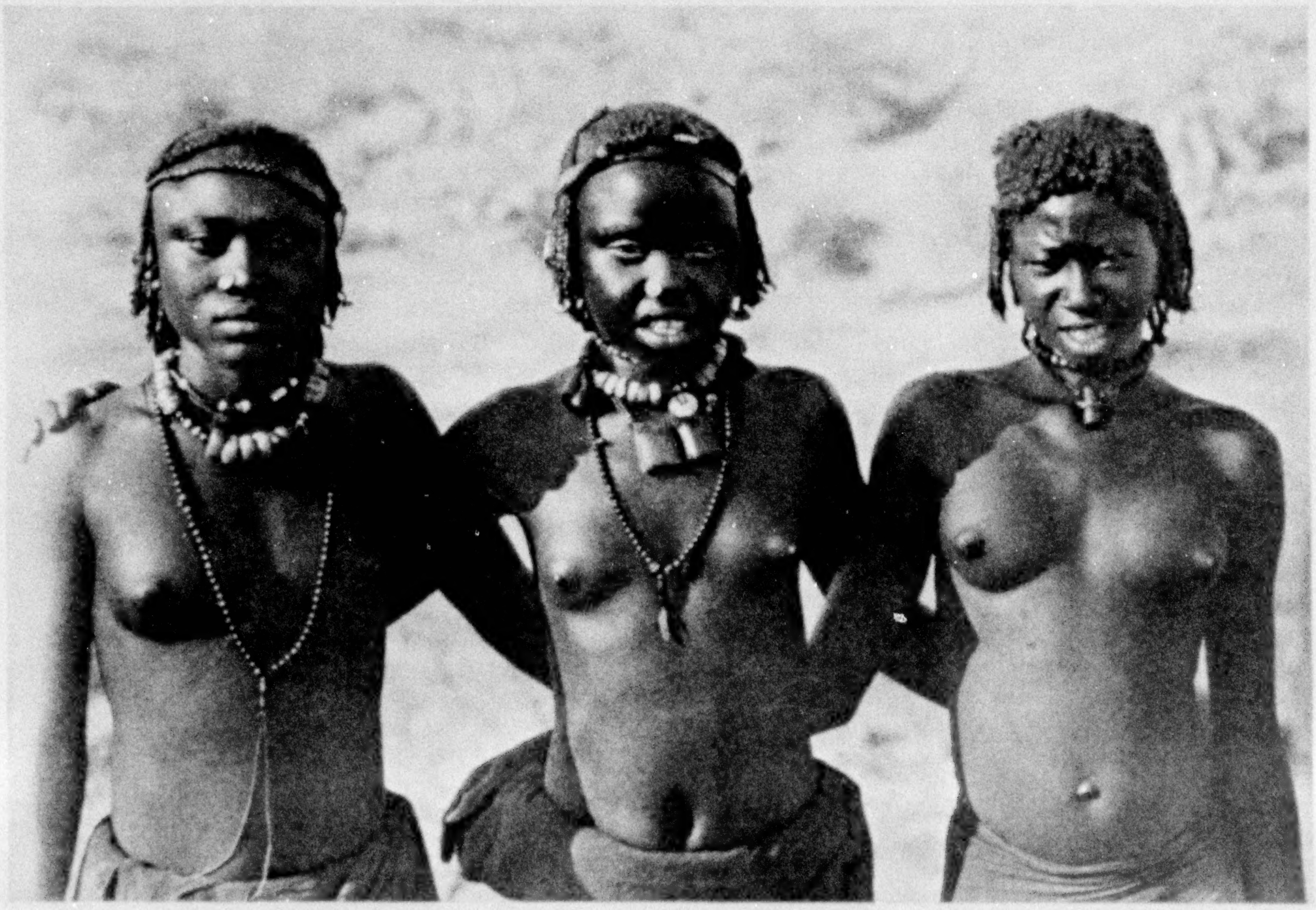
About a mile from us, through a deep gorge which leads to the foothills, and built up along the slope of one of the hills, was a Nuba village, its conical-roofed houses made of thatch and earth. Now, the Nubas are still one of the wildest tribes of the Sudan. They are distrustful of everybody and everything, as well they may be, because during many years the Messeria raided their villages, killing every man who made resistance and carrying off the others as slaves. They are to this day dirty, savage, and suspicious.

We liked our shady grove, and while Schoedsack and I prepared for picture work Mrs. Schoedsack took over the camp. She superintended our servants, installed an outdoor kitchen, and performed the manifold duties of camp life with the



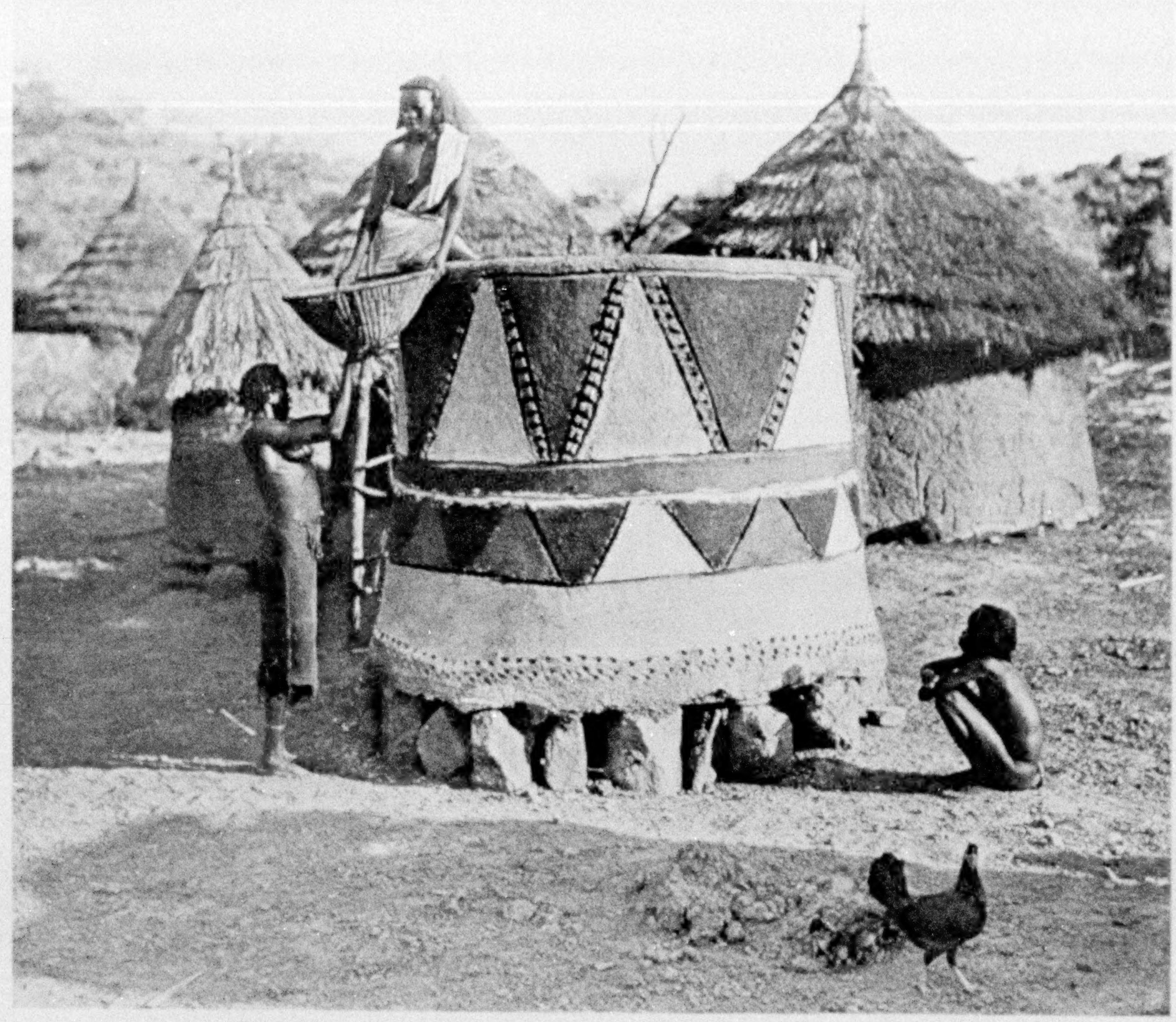
THEY KEEP THE PAX BRITANNICA IN KORDOFAN

A company of the Camel Corps formed in a square in battle position. Kordofan Province, now peacefully administered by a few lonely Britishers with the aid of native troops, was the scene of the Mahdi's rise to influence, for among the Baggara, to which tribe the Messeria belong, he found some of the most fanatical warriors of his force.



THE NUBA SMILE CAN BE INFECTIOUS, TOO

Woolly hair, thick lips, and dusky hues show how their race, though mixed in origin, remains essentially Negro.



NUBAS KEEP THEIR PRECIOUS GRAIN IN A CYLINDRICAL STOREHOUSE

They make various dishes from durra (millet) and maize, but vary the menu with live, honey-covered flies and locusts, slugs, snakes, monkeys, dogs, pheasants, and other animal and bird flesh. A hen and her brood of chicks in the foreground lend a homey note to the scene.

same excellence and capability which she displayed all during our year in Africa.

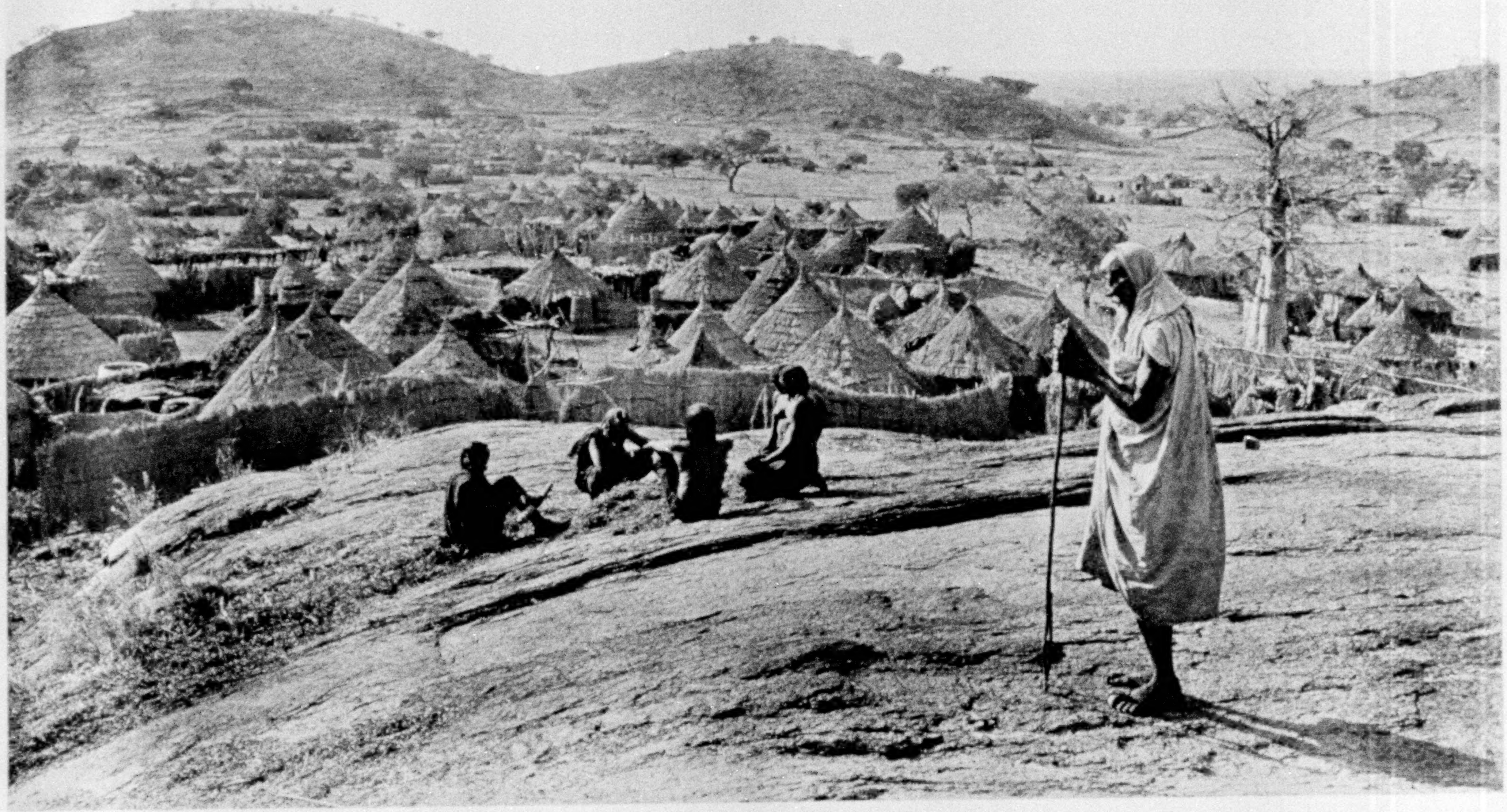
The second day in camp we were awakened by the sound of many voices. Turning out from our tents, we saw as strange and picturesque a cavalcade as one could hope to find in long traveling. Schoedsack and I have seen some nomad peoples on the march—the Uruks of southern Turkey, the Arabs of Mesopotamia, the Bakhtiari of Persia—but to my mind none of these could equal the Messeria for sheer picturesque color, though, of course, this day they had on all their special finery for our benefit (see page 471).

This column that we saw coming toward camp was the *ferik* of the Nazir himself. Black men and brown men in white robes and white turbans rode dashingly by on rough little ponies. They sat upright in their high-pommeled saddles, and their long-bladed spears and their bridles of chain flashed and glittered in the sunlight.

STRANGELY CAPARISONED CREATURES ADVANCE BETWEEN THE RIDERS

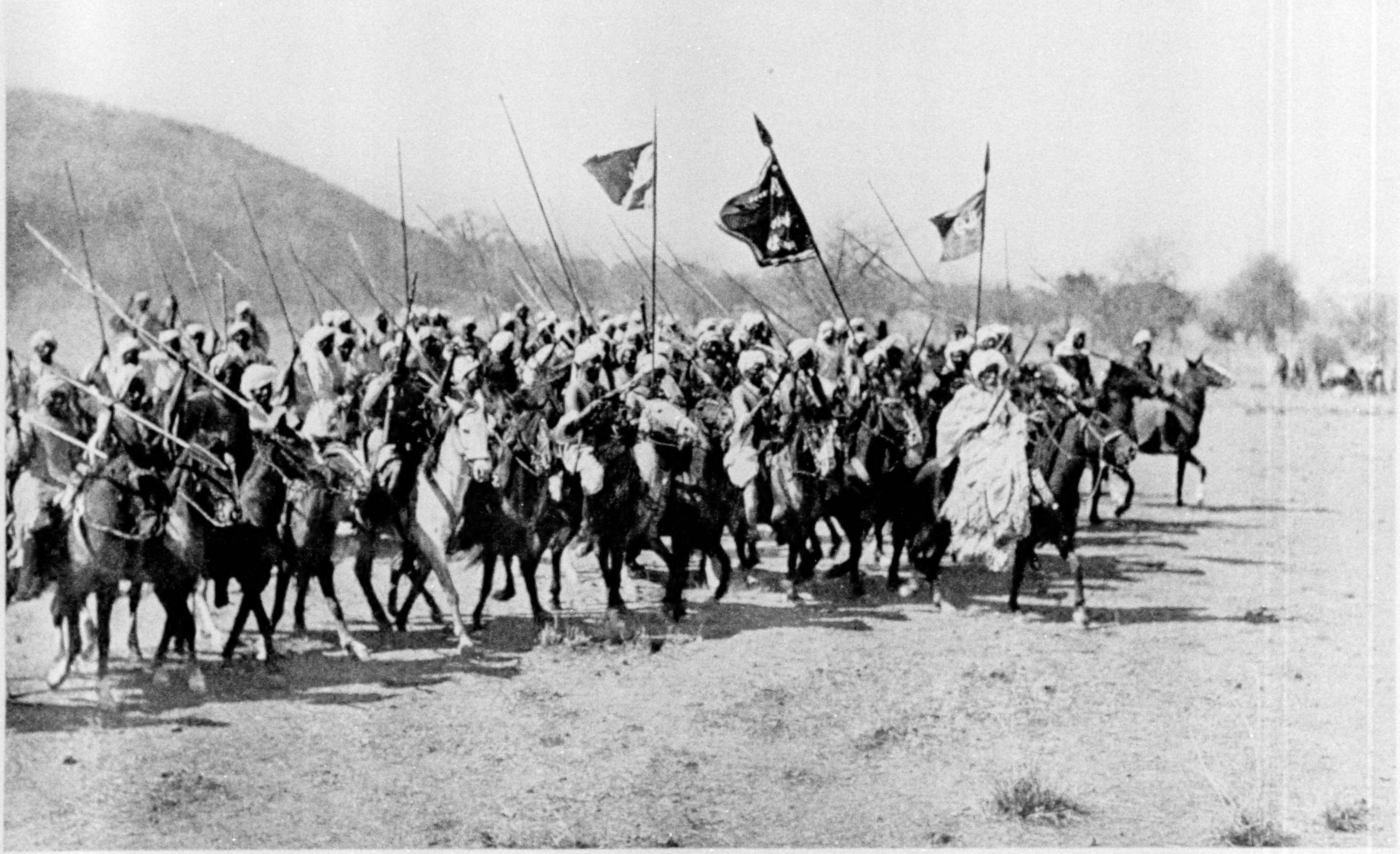
Between the riders, slowly and ponderously, there walked a long, single column of odd-looking objects. For a moment we could scarcely make out what these strange things were. Huge, monstrous shapes moving—that was all we could see.

But as they came closer we perceived that these curious objects were horned bulls, each animal almost hidden under an enormous saddle and a framework, which were covered with blankets of leather into which were woven innumerable small shells. On each one of these big frames



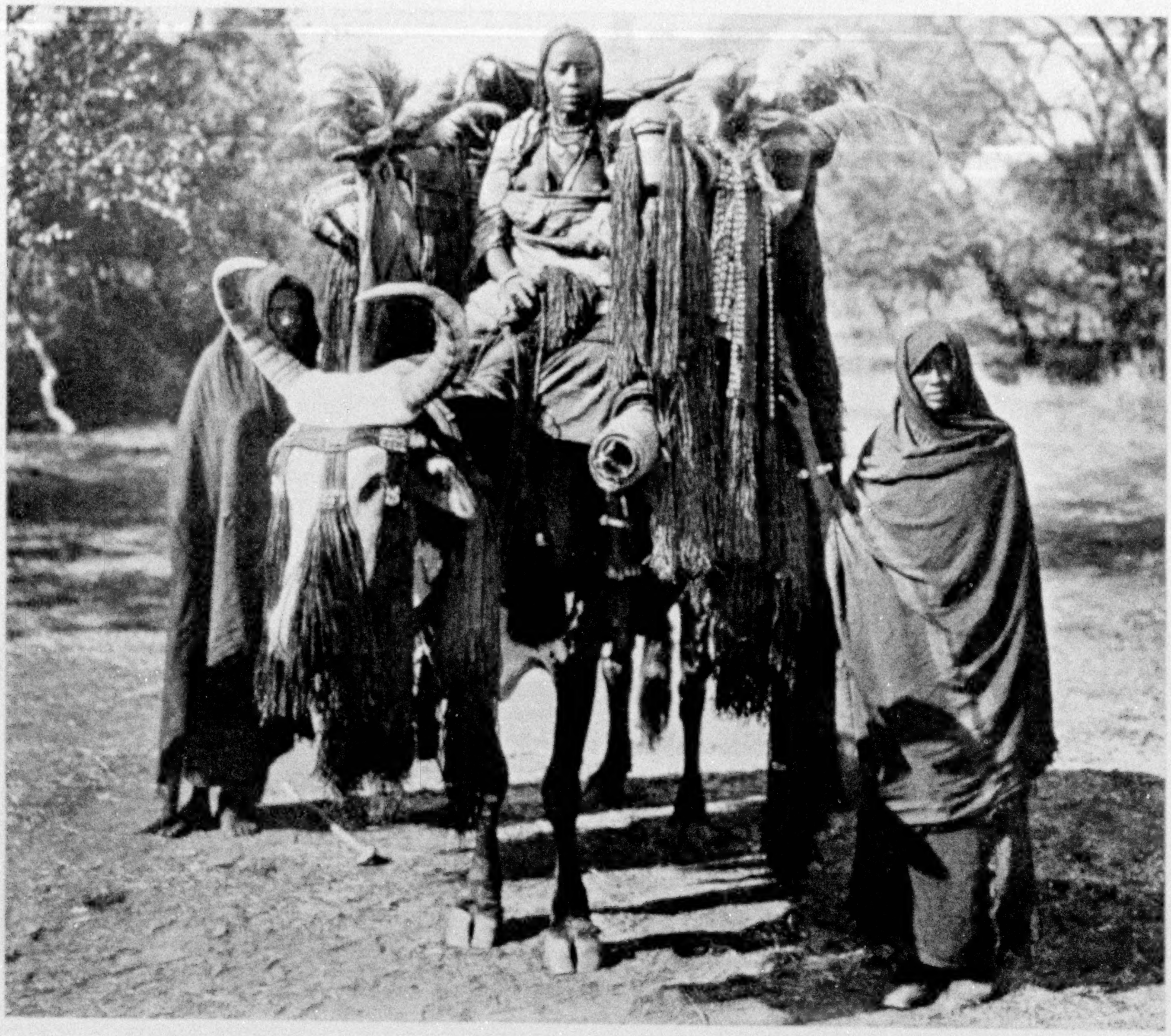
NUBA VILLAGES HUDDLE IN THE SHELTER OF THE HILLS

The huts, made of mud which has dried to concretelike hardness, are thatched with pointed roofs. The wives and children usually live in one house, the husband in another. Long ago, to escape Arab slave raids, the Nubas moved their homes from the plains to mountain strongholds.



FEW NOMAD PEOPLE SURPASS THE MESSERIA IN PICTURESQUENESS

Shouting black men and brown men in white robes and white turbans, their spears waving and their bridles of chain flashing in the sunlight, pass in review with their chieftain at their head (see text, page 469).



THE HOUSEHOLD EQUIPMENT OF THE NAZIR ON THE MOVE

With leather tassels flying and ostrich plumes waving, a bull moves ponderously under a huge framework piled with rugs, pots, pillows, and all the other personal and domestic luggage of the Messeria chief. Sitting on top is one of the women of his family, herself a barbaric vision of brilliantly colored dress and glittering ornaments of gold and silver. At the side walk two attendants, whose duty it is to balance the whole unwieldy burden.

were piled and hung rugs, pots, pillows, clothing—indeed, all the household equipment of a nomad native chieftain. On many, great bouquets of ostrich plumes jutted out at the front and on both sides of the enormous piles of luggage (see illustration above).

Some of the bulls had a kind of leather glove fastened on each of their horns, and beaded work and leather tassels hung from broad bands across their foreheads in such quantities as almost to blind the poor beasts. From every part of the contraption flapped long streamers made of dozens of fine cords of thin leather.

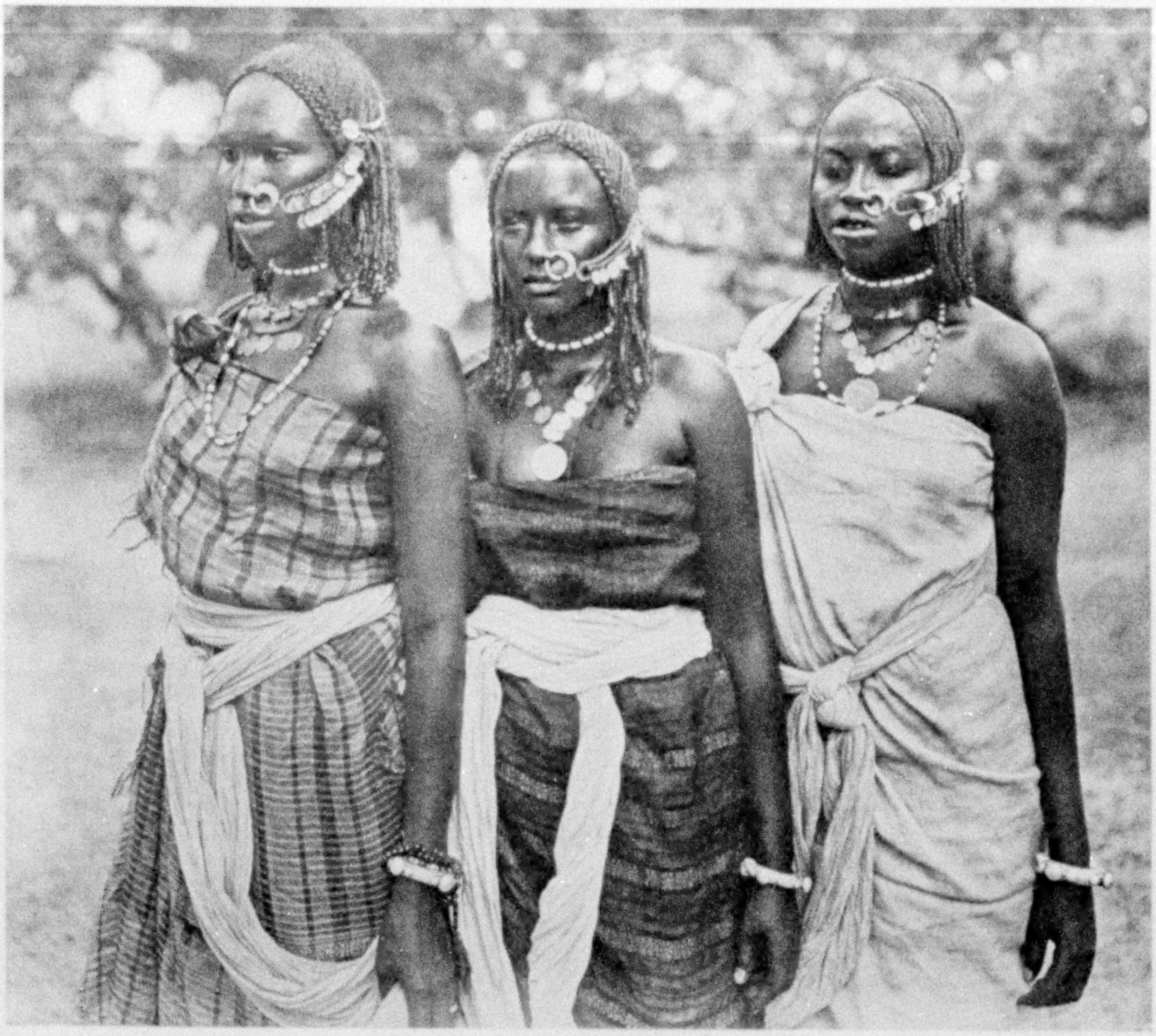
On top of each one of these weird-appearing beasts sat a woman, one of the wives, daughters, daughters-in-law, aunts, cousins, or what not of the Nazir.

And what women! Their robes, loose and graceful, were of brilliant colors. From every possible point dangled ornaments of silver and gold and strings of brilliantly colored beads—silver anklets, bracelets, necklaces, strings of golden coins, earrings; and frequently from nose to ear swung a heavy string of golden coins, while many of the women were crowned with what appeared to be spiked helmets of silver openwork (see p. 475).

To enable the poor bulls to proceed and to keep in place their unwieldy burdens, beside each animal there walked from two to four women attendants, constantly busy balancing the whole load.

The sound of the marching columns was barbaric.

The warriors dashed madly up and



IN THE NAZIR'S EYES, THESE GIRLS ARE BEAUTIFUL

In the camp of the Messeria chief are many handsome girls. Though he never has more than four or five wives at one time, he often changes; for, it was explained, "he likes plenty divorces, plenty new wives" (see text, page 477).

down the line, waving their spears and shouting, now and then sharply reining their horses to a full stop in front of us. Bells tinkled. An old man clad in white robes sat with great dignity on the back of a huge black bull and beat on a pair of drums in steady rhythm.

THE GENTLE-LOOKING CHIEF ONCE A FAMOUS WARRIOR

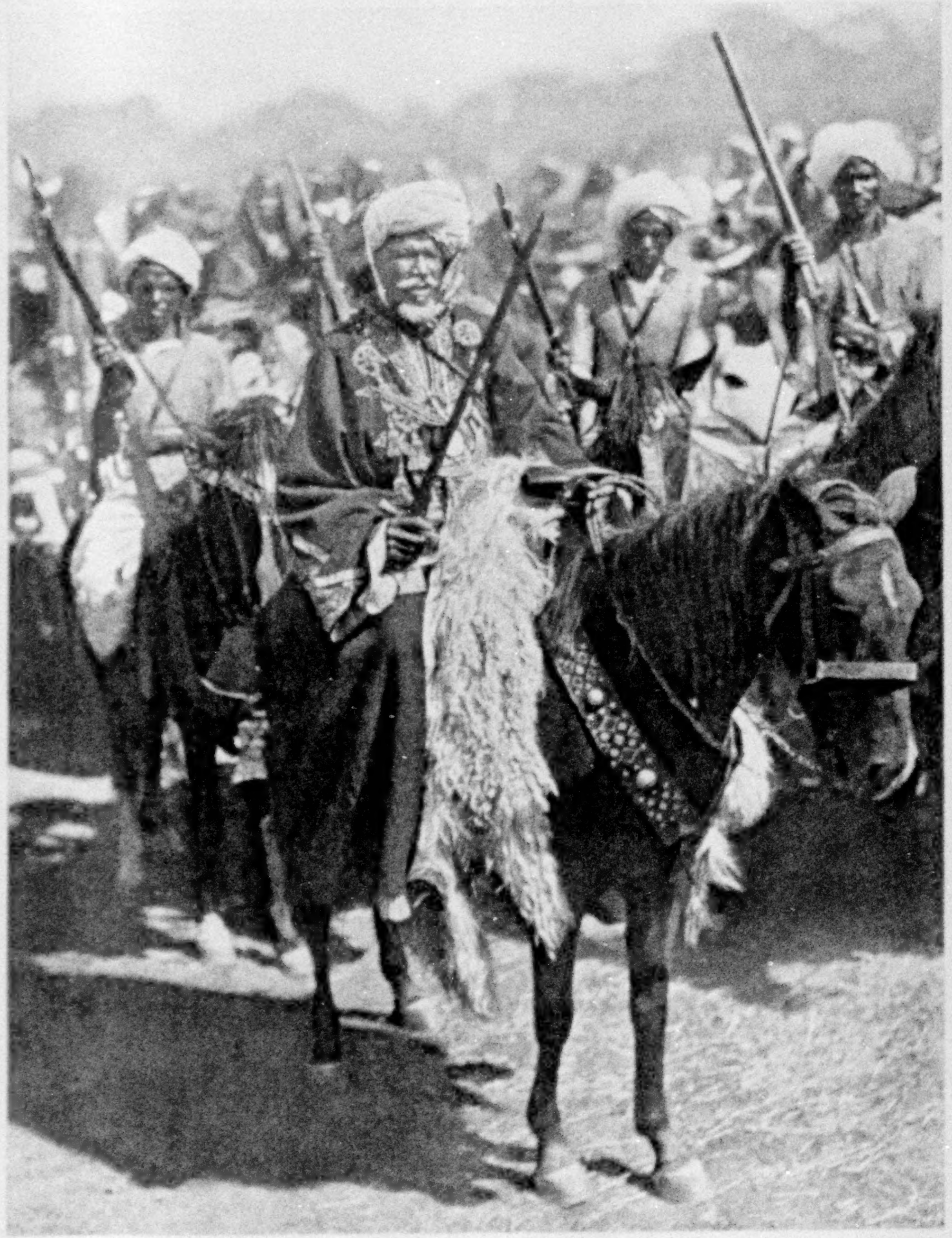
Then finally came the central figure of all, the Nazir, the chief, the ruler of the tribe. He made a gorgeous figure. A long, beautiful, white sheepskin covered his saddle, while the trappings of his horse were studded with shining metal.

A long blue robe of honor, embroidered in gold and silver, dropped to where it almost covered his feet. A great medal of silver hung among the golden crossbands which fastened his robes at his breast. A snowy white turban was held firmly on his head by a silken cloth of many colors bound about head and chin, and from one shoulder and projecting from under the armpit hung a long sword with a hilt of gold (see illustration, page 474).

He rode with his chin up, did this old nomad chieftain, and his straight nose, aquiline features, white beard, and white mustache gave him an air of dignity and command.

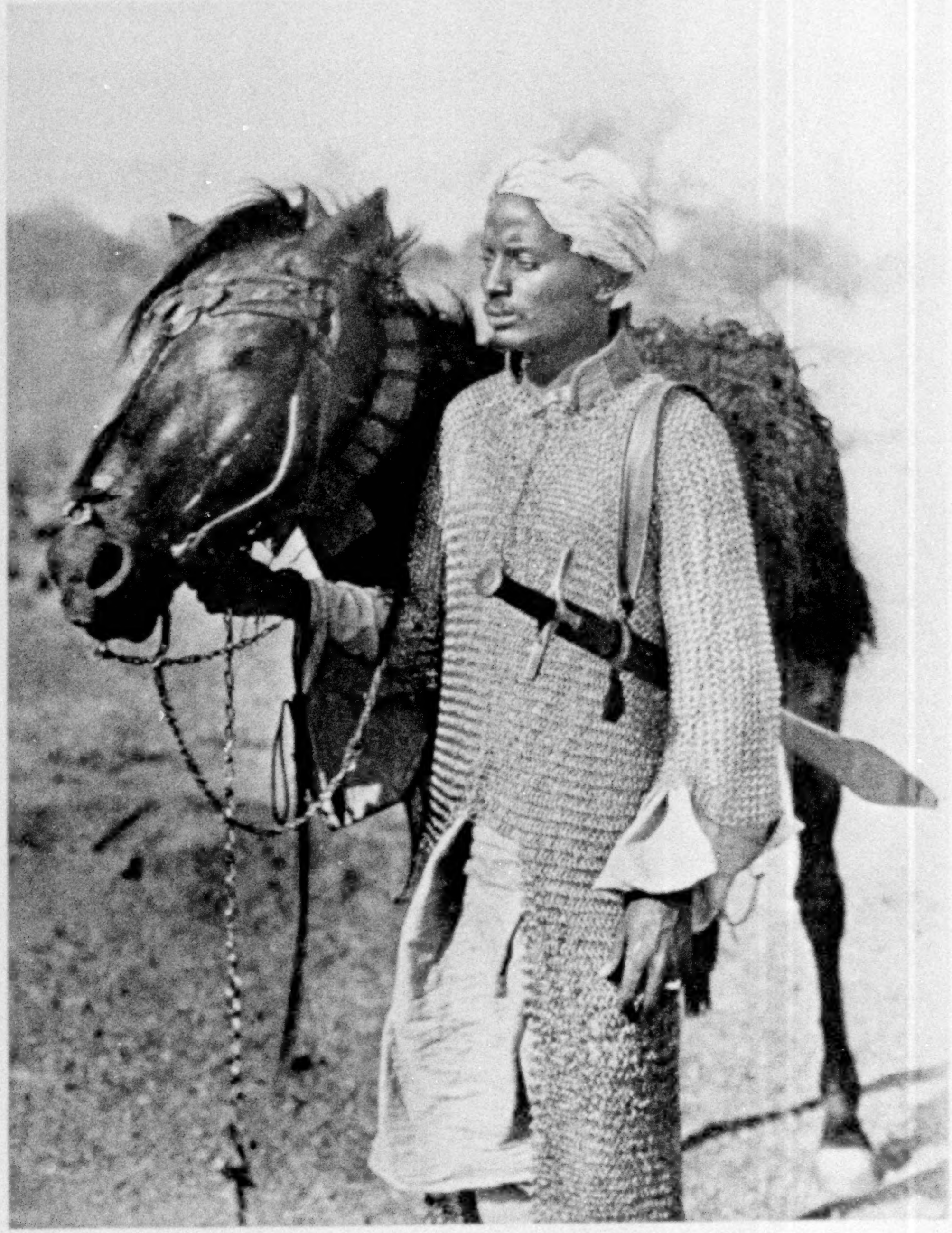
About the Nazir galloped his bodyguard on dancing, spirited horses. They sat upright, despite the fact that from the shoulders of each and every man of them hung a heavy coat of mail which dropped to his ankles. They alone were armed with guns, though, indeed, even a few of these

XUM



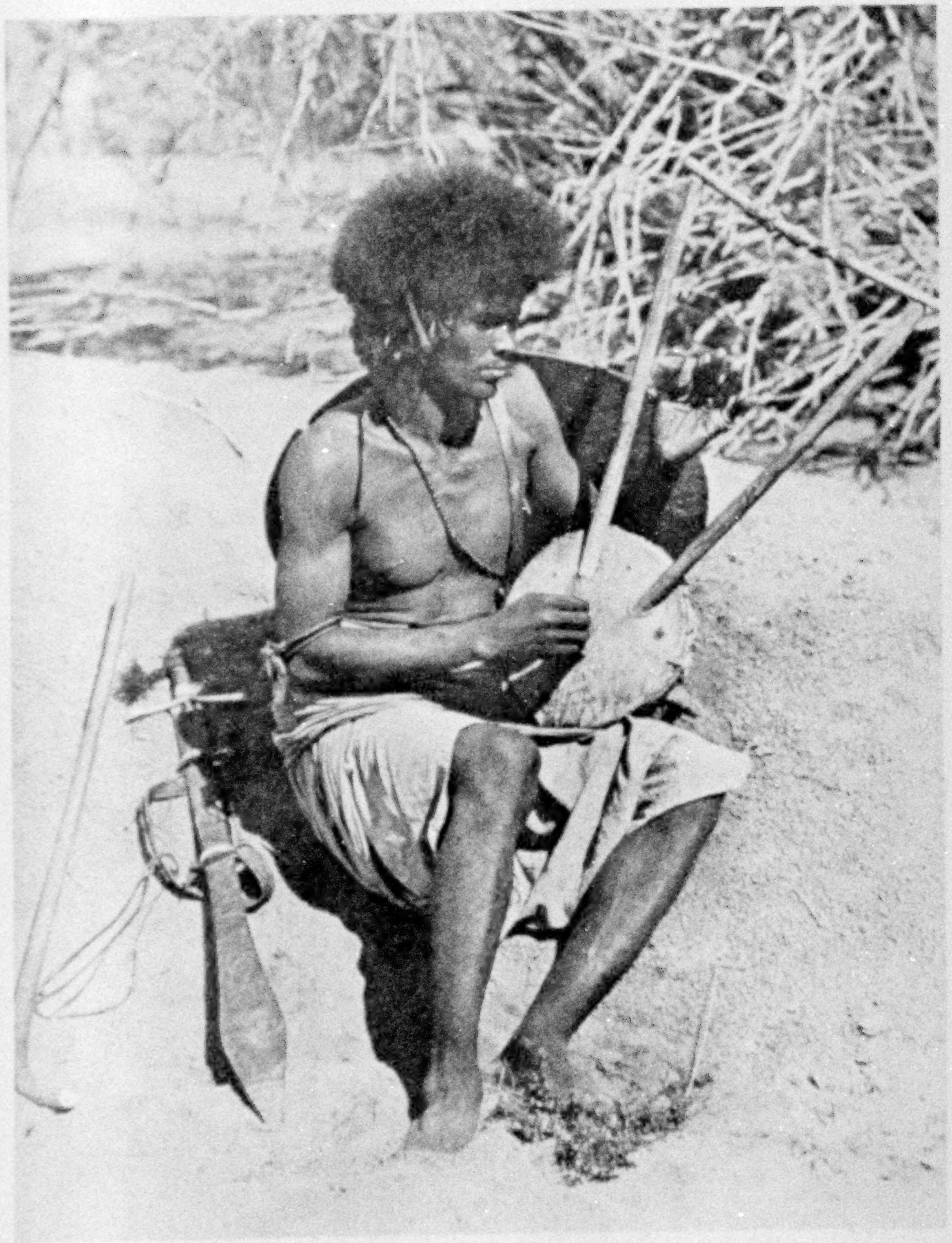
THE NAZIR OF THE MESSERIA RIDES UP IN NOMAD SPLENDOR

At the battle of Omdurman, in which Lord Kitchener, in 1898, broke the dervish power, this patriarch commanded 100 men. Once one of the most notorious of slave raiders, he listens to-day to the yea and nay of one lone British official and obeys absolutely (see, also, text, page 476).



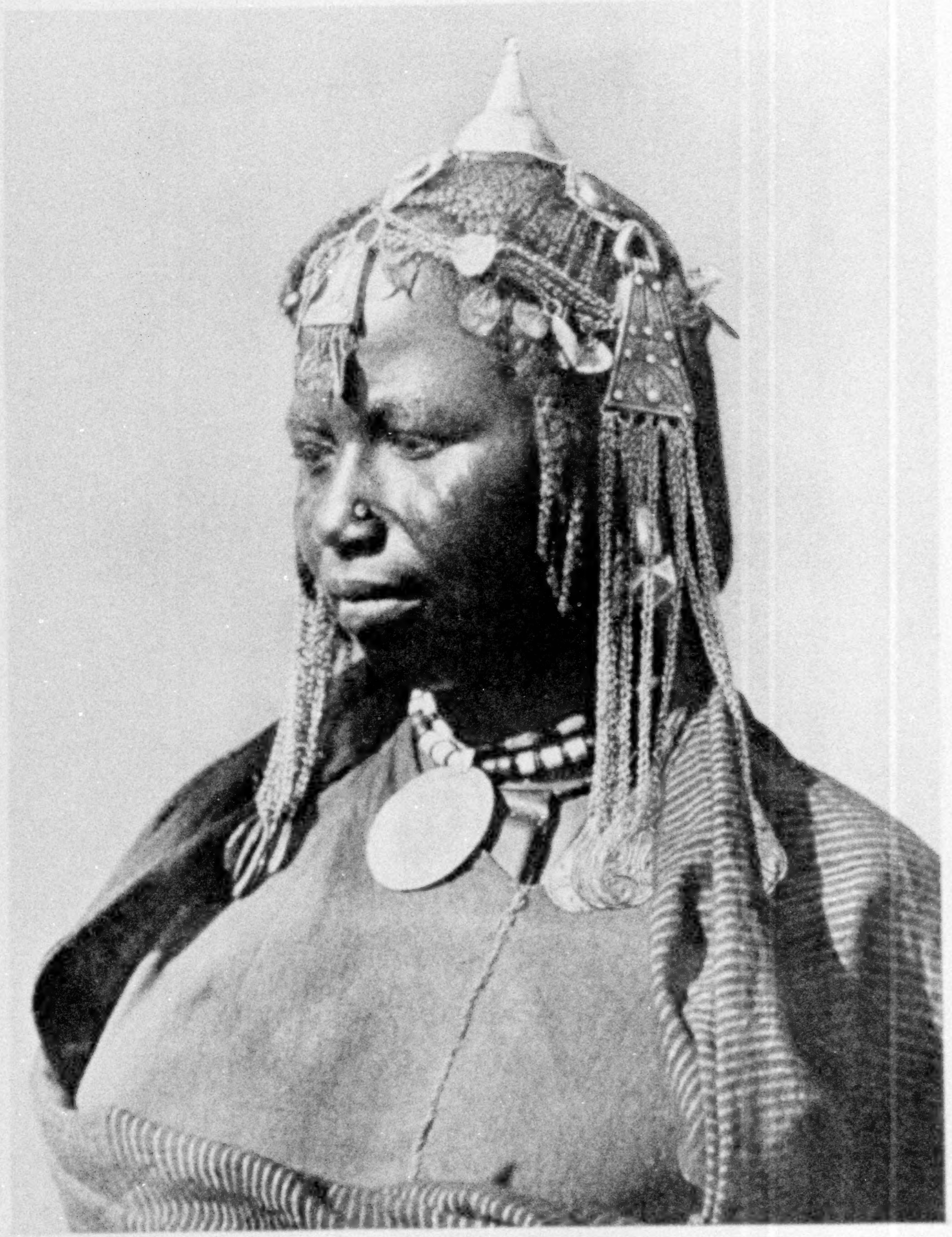
A NOMAD "CRUSADER," DRESSED AND ARMED IN CHARACTER

The Messeria's custom of wearing chain mail and of carrying the straight-bladed, cross-hilted sword, dates from the Crusades. A good Damascus blade and an old suit of chain mail may occasionally be seen to-day, but they are more likely to have been made in Birmingham, England.



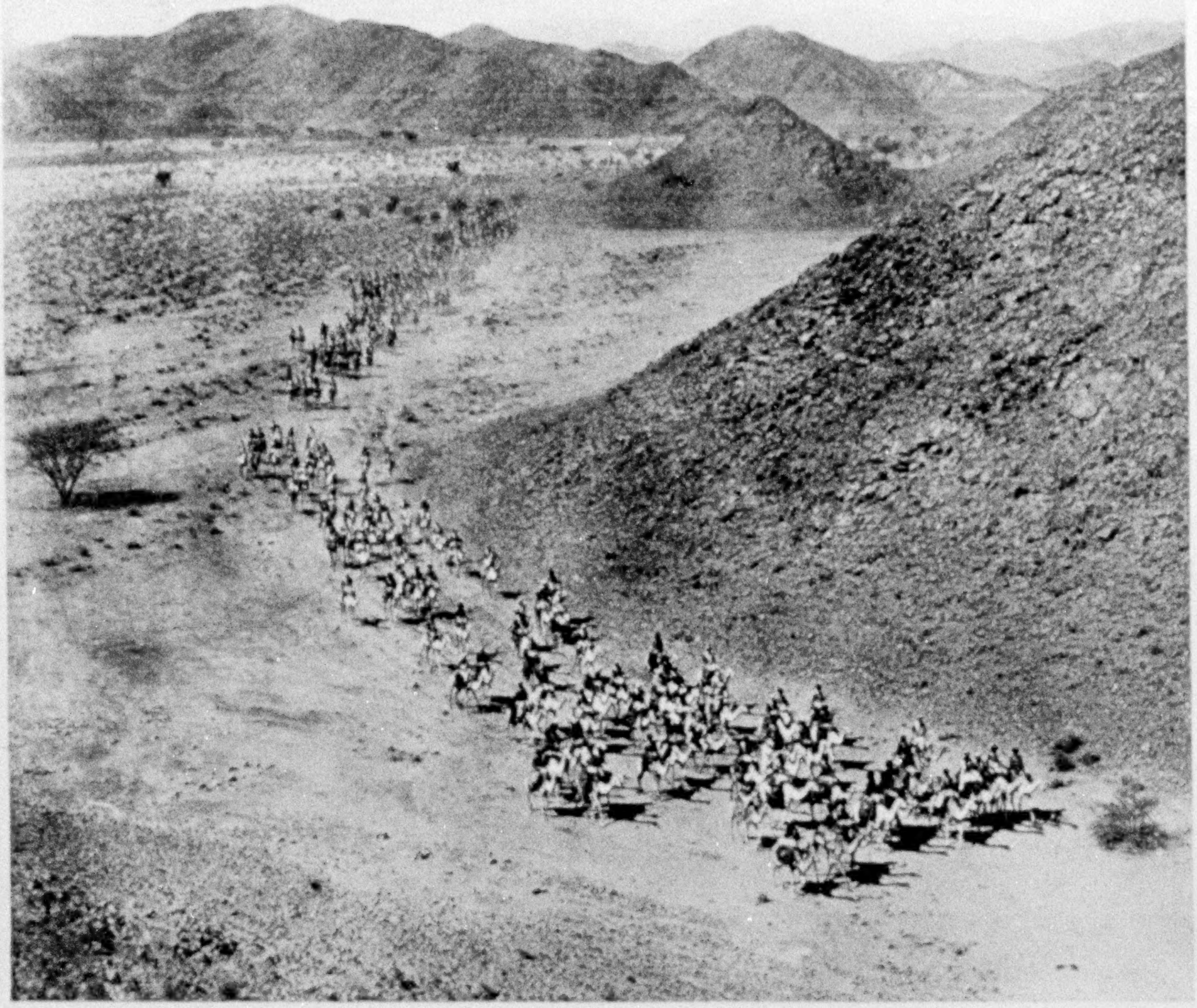
A SERENADER OF THE RED SEA HILLS

There are bards in every small tribe, and this is the usual form of stringed instrument used among the Amarar.



COIFFED WITH PRECIOUS METAL

A form of headdress made of silver and light in weight is worn by Messeria girls. The nose button is common among the women.



"BIG BLACK BOUNDIN' BEGGARS" ON THE MARCH

"For you broke a British square!" Such is the refrain of Kipling's ballad of the Sudan Expeditionary Force. These men are Amarar, who, with the Beni-Amer and Hadendoa, are known as the camel tribes of the Red Sea Hills, as distinguished from the horse tribes of Kordofan.

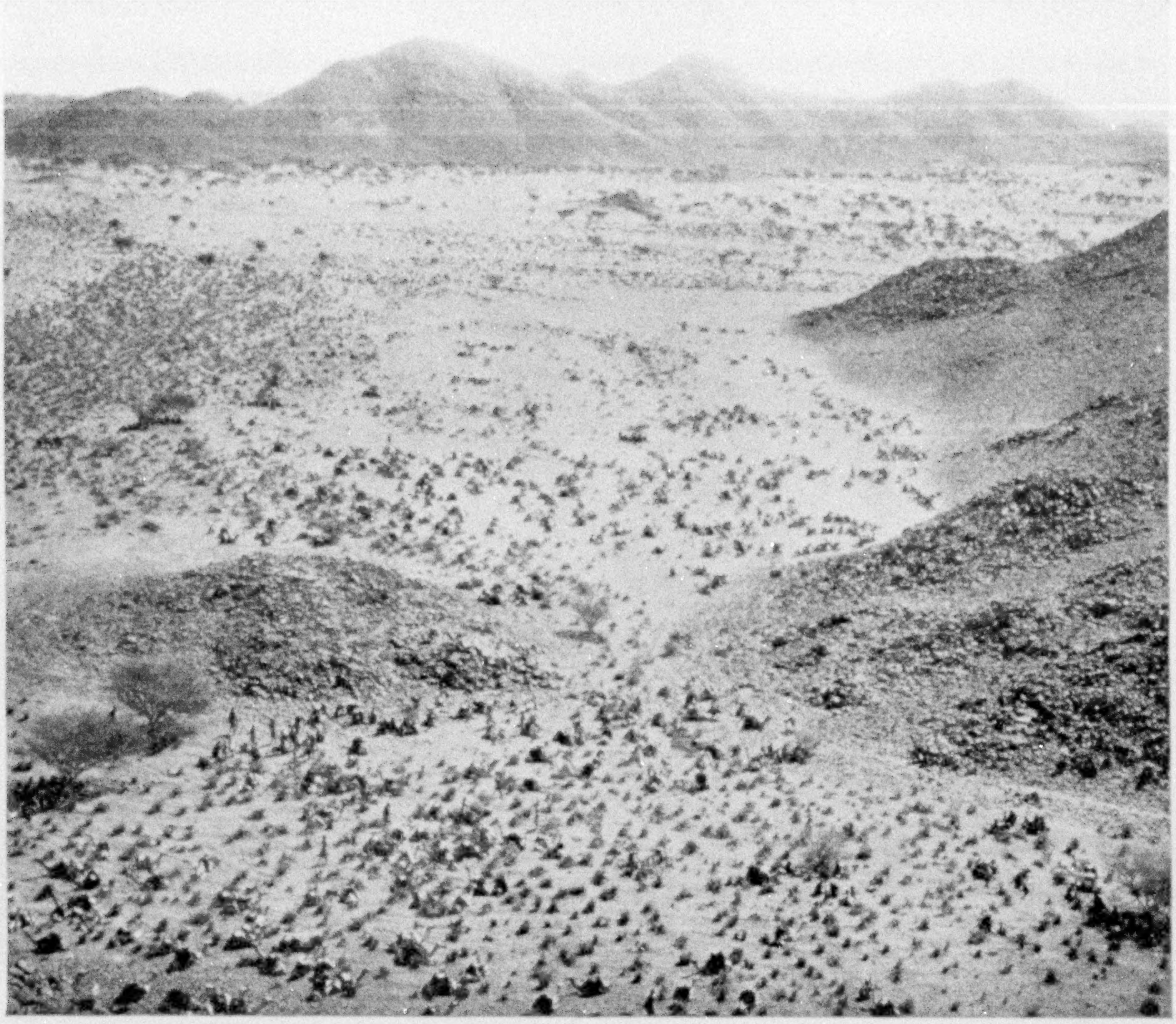
carried the familiar big-bladed spear (see page 471).

It seemed strange to see nomad warriors clad in armor such as our own European ancestors wore in the Middle Ages. As a matter of fact, this custom, in many parts of this region, is directly handed down from the Crusades, as is the type of straight-bladed, cross-hilted sword so much like that of many a European knight who left his bones to bleach in the sands of Syria and Palestine. Now both armor and swords more frequently come from Birmingham, England, than from anywhere else, though occasionally one finds a good Damascus blade or a suit of chain mail dating from ancient times.

As the chief rode up to us and halted, he smiled, and this smile seemed to change him from a warrior chieftain into a very gentle patriarch. But the sub-mahmur (native assistant to the District Commissioner) said: "Ah, the Nazir has killed many men with his own hand in the old dervish days. He was a commander of a hundred men at the battle of Omdurman and was one of the most famous of the slave raiders."

And now one lone British official sits at Abu Zabad and says to this chief yea or nay, and the old killer and slaver obeys absolutely!

But it is the policy of the British to leave as much power as possible with the native chiefs; so the Nazir holds court among his own people for minor offenses. According to the sub-mahmur, the Nazir can fine a thief the value of the goods stolen, and can fine a man the equivalent of ten dollars for "house trespass." As



WHEN BRITAIN CALLED, THE FUZZY-WUZZIES CAME FORTH

Though only a handful of white men rule this vast country, they have made the Empire's name respected to the four corners. At the request of the British authorities, an Amarar chief promised that 100 of his men would ride in to the Americans' camp at the edge of the Red Sea Hills; more than 500 natives responded (see text, page 485).

these people live as nomads and have no houses, this term was puzzling to us. The sub-mahmur explained that it means the old, old sin of the Seventh Commandment. He said the man pays, the chief keeps the fine, and the woman goes unpunished. We wondered what the husbands thought of this system.

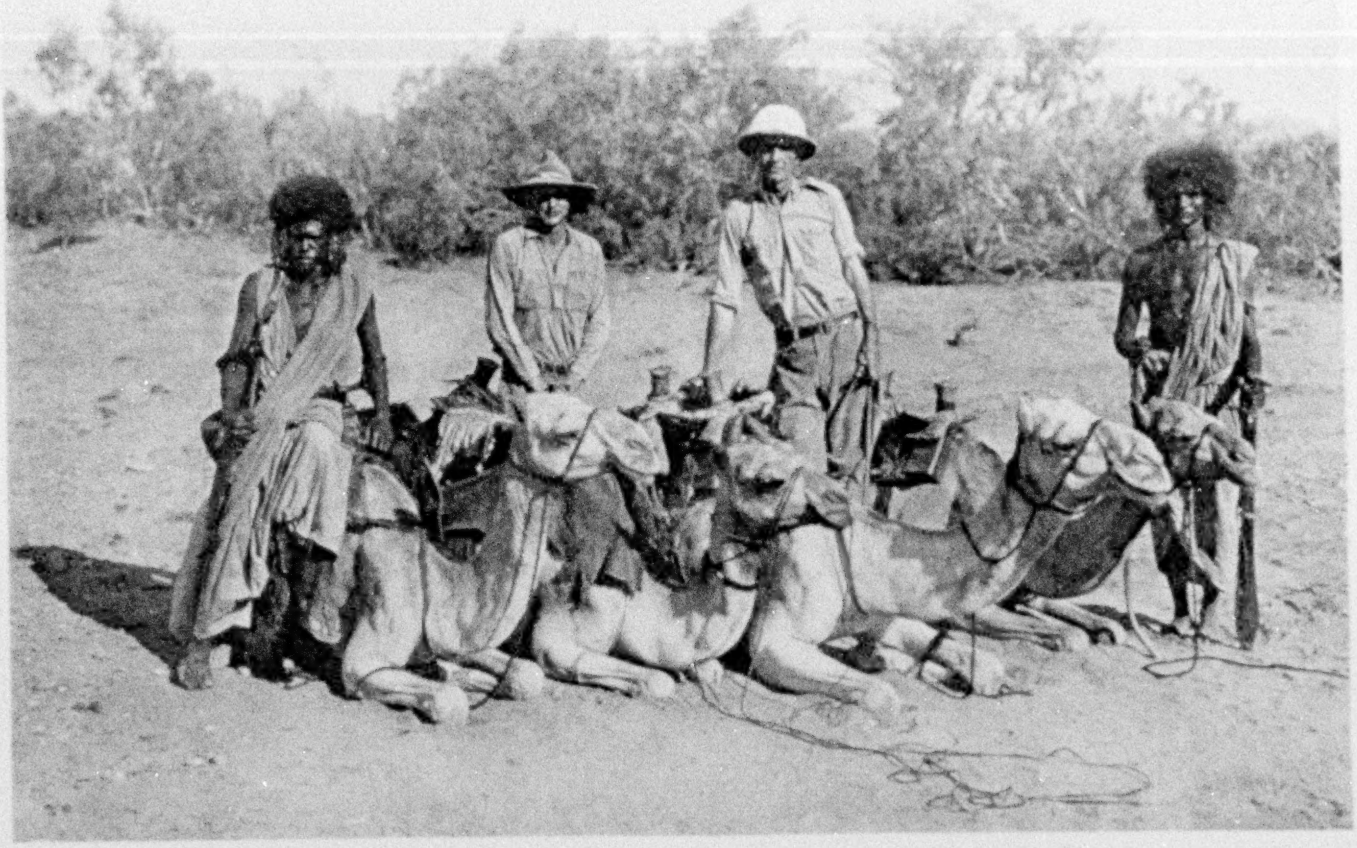
"ONLY FOUR OR FIVE WIVES AT A TIME"

During our days at his camp we frequently went to sit by the Nazir's fire, as he did by ours, and we noticed that there were many good-looking girls in his camp. Some, we were told, were the wives of his son, and some were his own daughters, and some were just relatives; but four or five of the youngest and fairest were his own wives. "He never has more than four or five wives at a time," the sub-mahmur explained. "But he changes wives often. He likes plenty divorces, plenty new wives."

THE NOMAD LIFE IS A GOOD LIFE

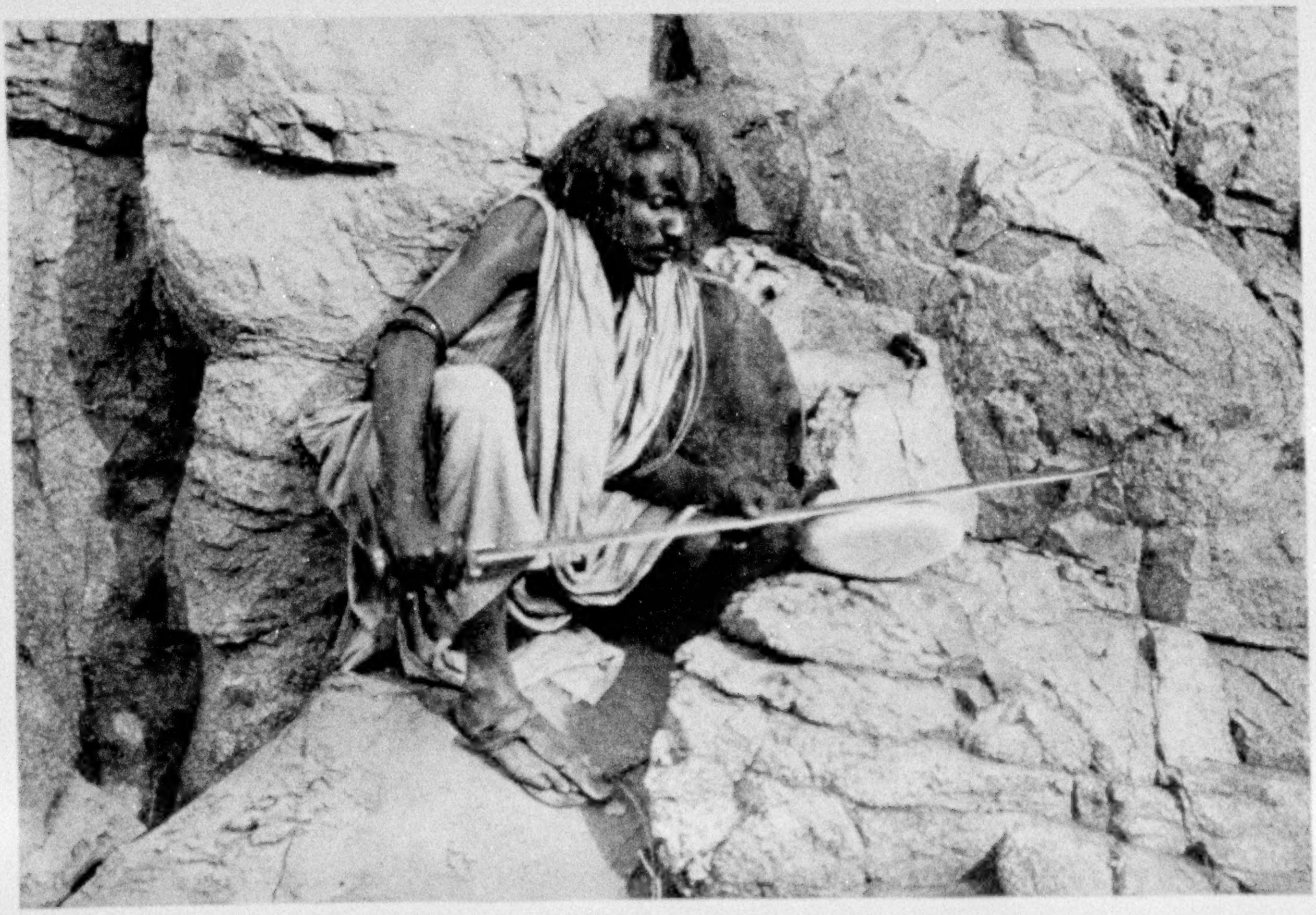
It was pleasant living with this old chief and his nomad people. At night Schoedsack and I often used to say that, judging from our own experiences, most of the warlike tribes of savage peoples were the easiest to get along with. Among such tribes we have always found fine hospitality, a keen sense of humor, and freedom from petty sulkiness. Thus were the Messeria. It was hard to believe that all of the middle-aged and older men who were treating us with so much courtesy had been noted savage warriors of the dervish empire, killers and slave raiders.

The nomad life is a good life. No



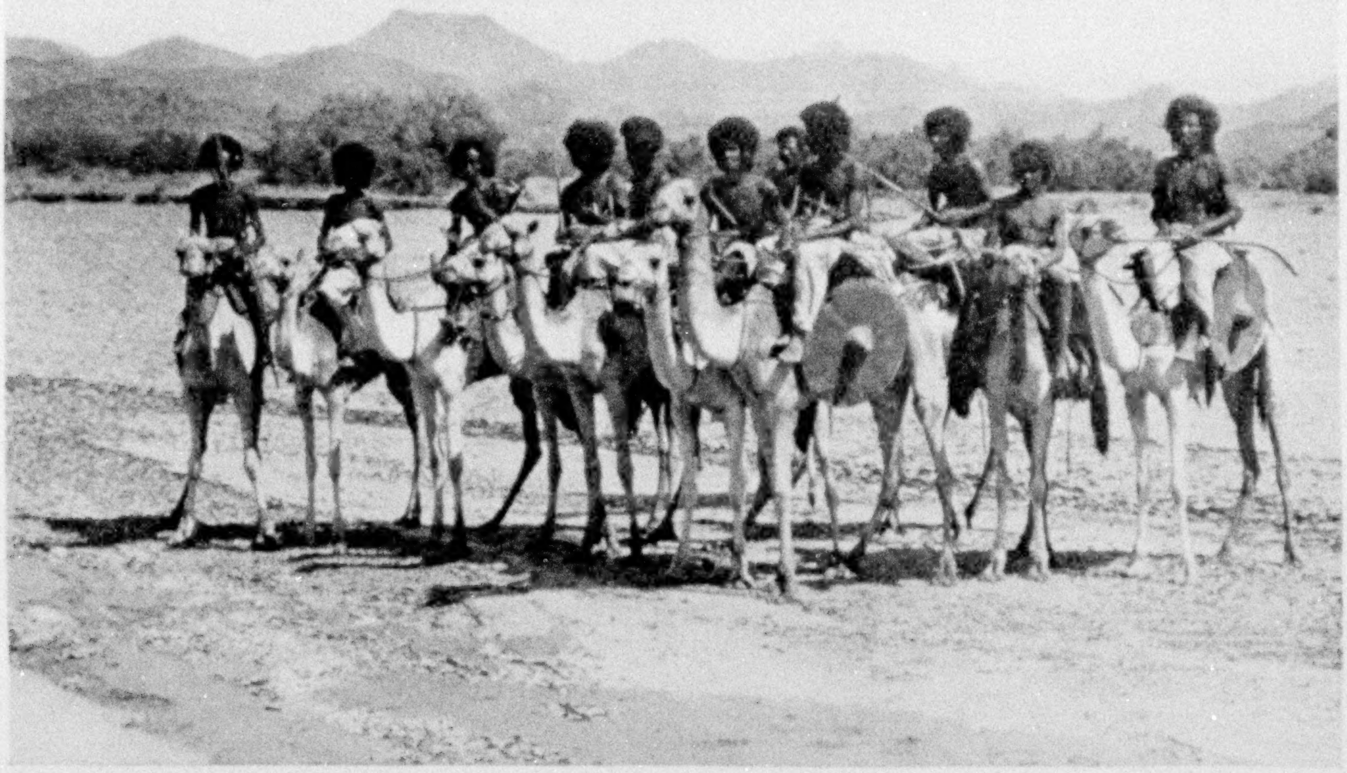
THE AUTHOR AND PHOTOGRAPHER MAKE FRIENDS WITH THE FUZZIES

At first the British authorities hesitated to allow the Americans to live among these tribesmen. Finally, however, the coveted permission was obtained.



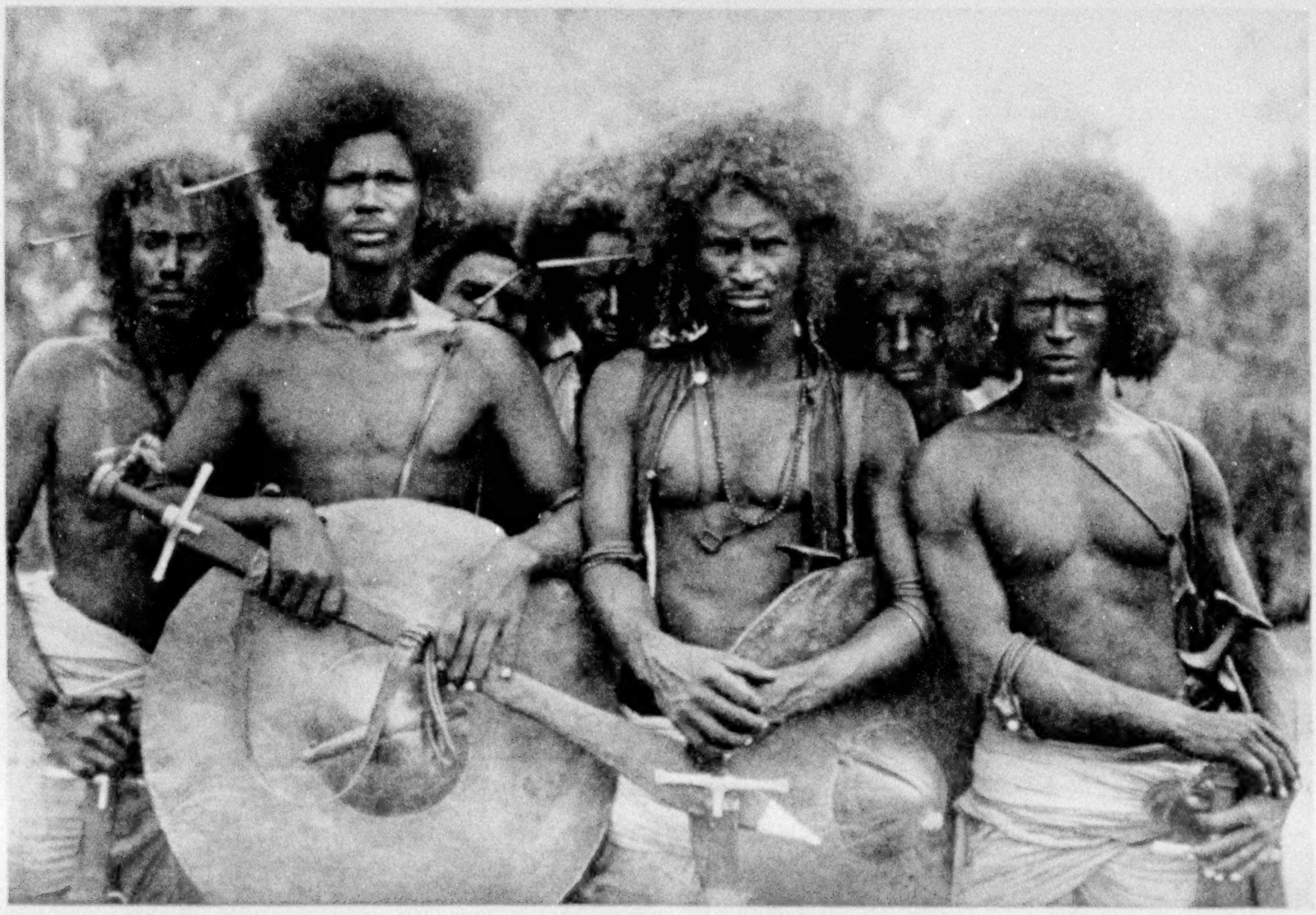
A FUZZY AMUSEMENT—SHARPENING HIS SWORD

Most of these weapons are kept as sharp as razors and often wear through the scabbard. Caution is necessary in drawing the sword, lest it come through and cut the hand.



THE FUZZY SKIMS THE GROUND ON HIS LIGHT RACING CAMEL

It is the usual custom in riding to sit with one foot hooked under one ankle and the free leg thrown over the front of the animal.



FUZZIES IN BATTLE ARRAY

Stripped to the waist, they are ready to fight. The swords are of the cross-hilted, Crusader type, and the heavy round shields are of elephant or rhinoceros hide.

THE AMARAR HAVE A SPECIAL TECHNIQUE IN DELIVERING A SWORD BLOW

question of it. The people are happy. Always changing about, always on the move, and with an intense delight in simple pleasures. How the women love to dance! And as for that, the young men, too. I find in my diary:

"The women commence dancing with two simple dances, to the sound of clapping hands and a chant, about 11 o'clock in the morning. It is 8 o'clock at night now—the moon and campfires are the only lights—yet the dancers are still going strong, apparently not at all tired.

"Schoedsack and I were out with the warriors all the afternoon. They staged a beautiful charge for us over terrifically rocky ground, only killing one horse, but no men, and when we arrived back in camp with them we stopped at the dance.

"Thirty or forty of the gold-and-silver-ornamented women were sitting in a circle clapping their hands and singing. Behind them stood dozens of the youths and older women, and as the mounted warriors rode in they, too, stopped to look and listen, and many of the younger men threw themselves off their horses and drew close to the dancers.

"As we walked up, all made way for us, until we had reached the edge of the inner circle. Then we could see five graceful young girls facing one man. The girls were alternately advancing and retreating as they danced—at first slowly, rhythmically, and then, still keeping the rhythm, with an ever-increasing speed.

"Suddenly, before Schoedsack and I realized what was happening, the women, still unsmiling, not changing their rhythm at all, turned and danced right up to us. When they were almost touching us, the five of them stopped as one, shook their braided curls in our faces, and then hastily retreated—as did we."

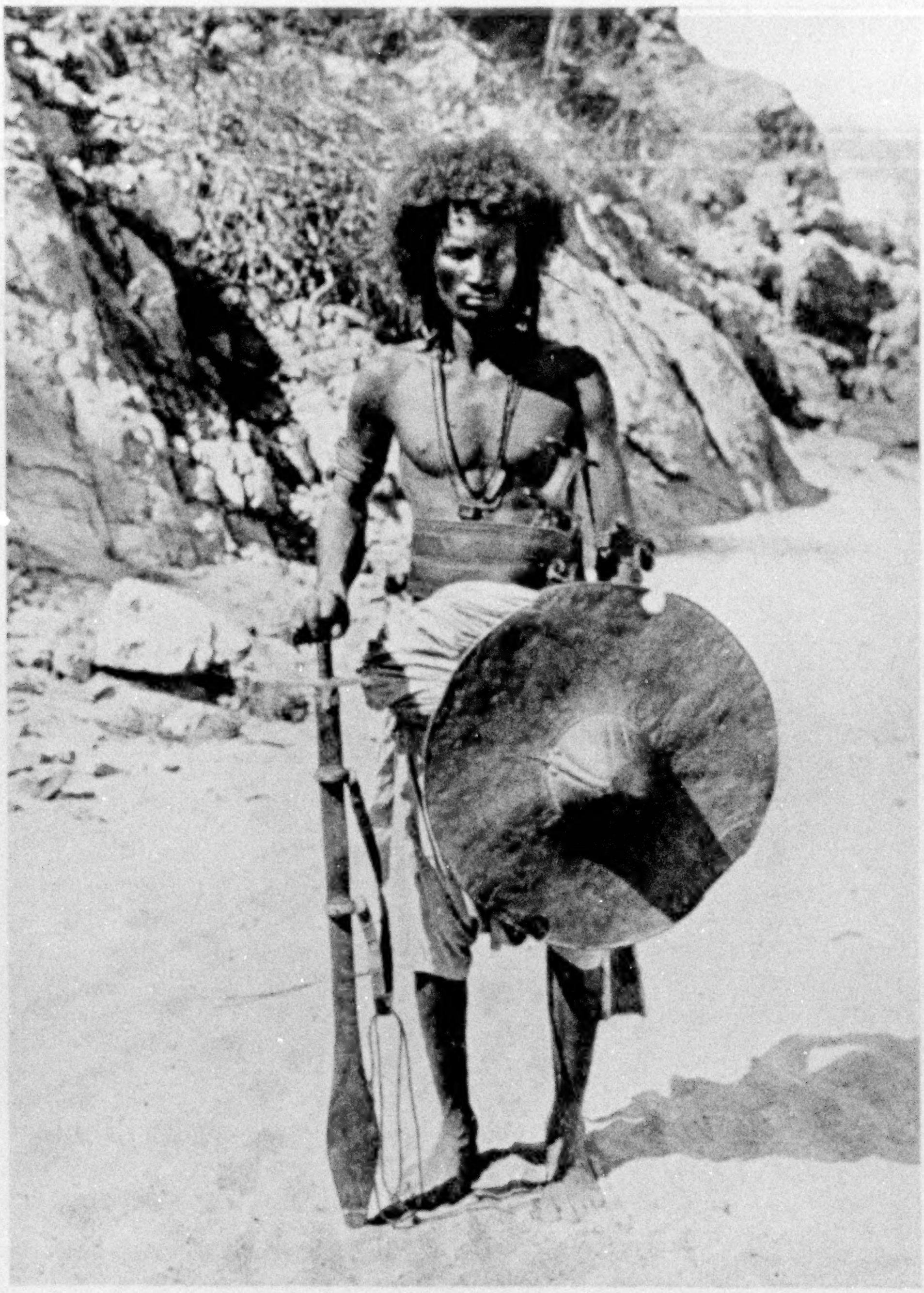
THE NUBAS DWELL IN SECRET CAVES

During the first few days, and we did not stay long, more and more feriks of the Messeria kept coming in.

At first the Nubas used to walk over from their little village. We visited one of them—a group of dirty little thatch and mud houses with cylindrical grain storehouses and a pet ostrich running freely about the place (see page 464). We became friendly with these Nubas.

But with the coming of more and more Messeria the Nubas became shier, for they and the Messeria had been deadly enemies for generations. They were both, in their way, splendid fighters; but the Messeria were better armed and, of course, being nomad horsemen, they had a mobility in surprise attacks which often proved disastrous to the Nubas.

The only safety of the latter, after the Messeria became armed with guns, was to retreat into the fastnesses of the mountains, where, in hidden caves unknown to any but themselves, even unto this day, they found secure retreat. Many of the Nuba villages are so built as to make them practically cliff dwellings.



HE RARELY GOES UNACCOUTRED FOR TROUBLE

As a rule, only the young men among the Amarar wear these heavy mops of hair.

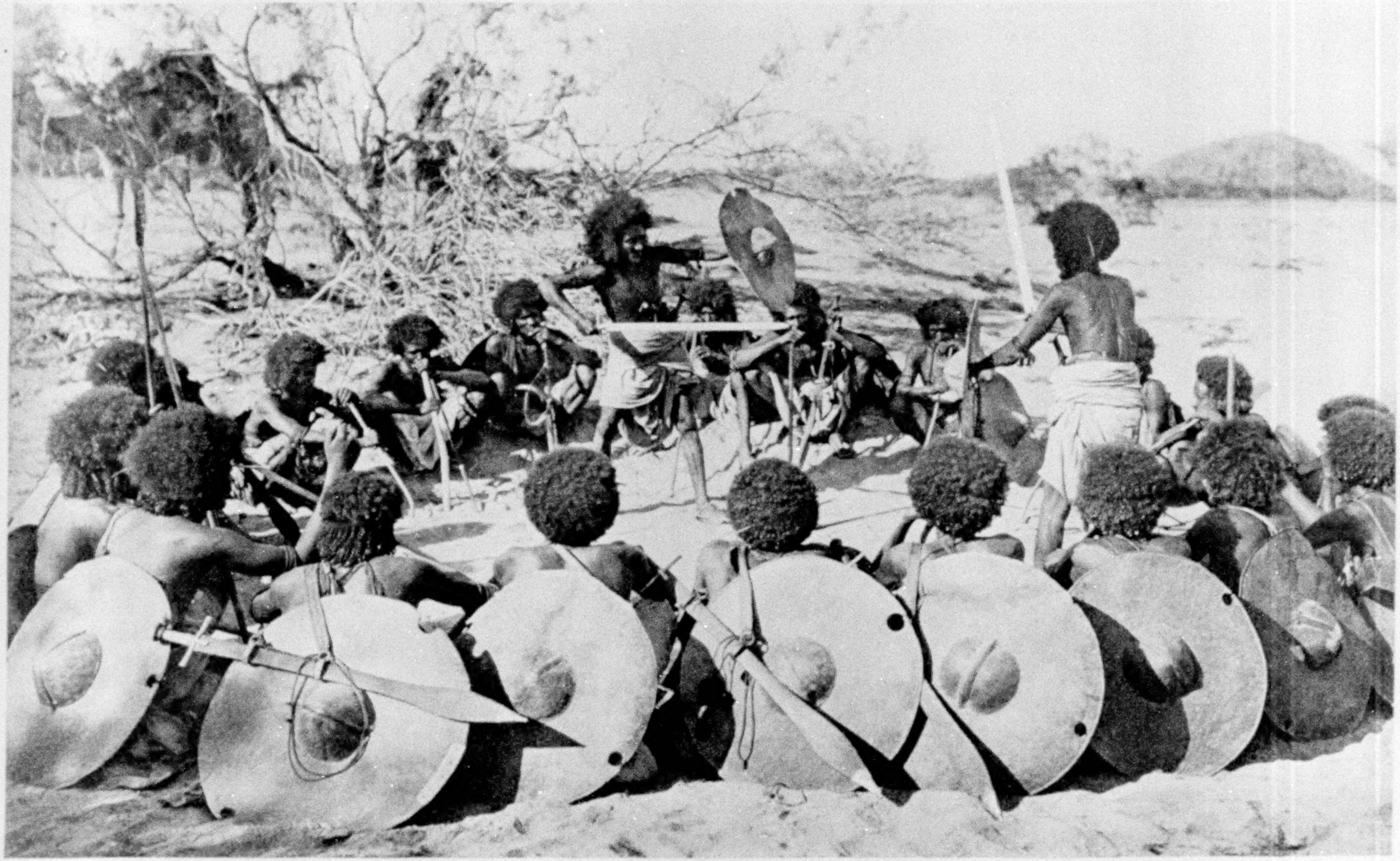
Accompanied by the Nazir, we stopped one day before such a cliff village. The Nazir looked up reflectively at the conical-shaped mud and thatch houses which dotted the ledges of the cliff side and told us how he and his men had one day attacked this same village. They had surprised it and, dismounting at the foot of the cliff, picked off the Nuba men with their rifles before they could escape. "We took back with us many, many slaves," said the old Nazir, and smiled his gentle, sweet smile.

We thought that it might make an interesting picture to stage such an attack by the men of the Messeria on the Nuba village which lay close to our camp; so we sent for the "sultan" of the Nubas, and the bearer of this gorgeous title, a ragged, half-naked old fellow, came into camp, accompanied by a dozen of his followers, equally unkempt and wild-looking.

The Nazir of the Messeria joined us, together with some of his chief men. We explained what we wanted, and in a minute the two old lads were eagerly discussing the idea, the sultan's enthusiasm having been aroused by a promise from us of much sugar and cloth. But his followers shook their heads.

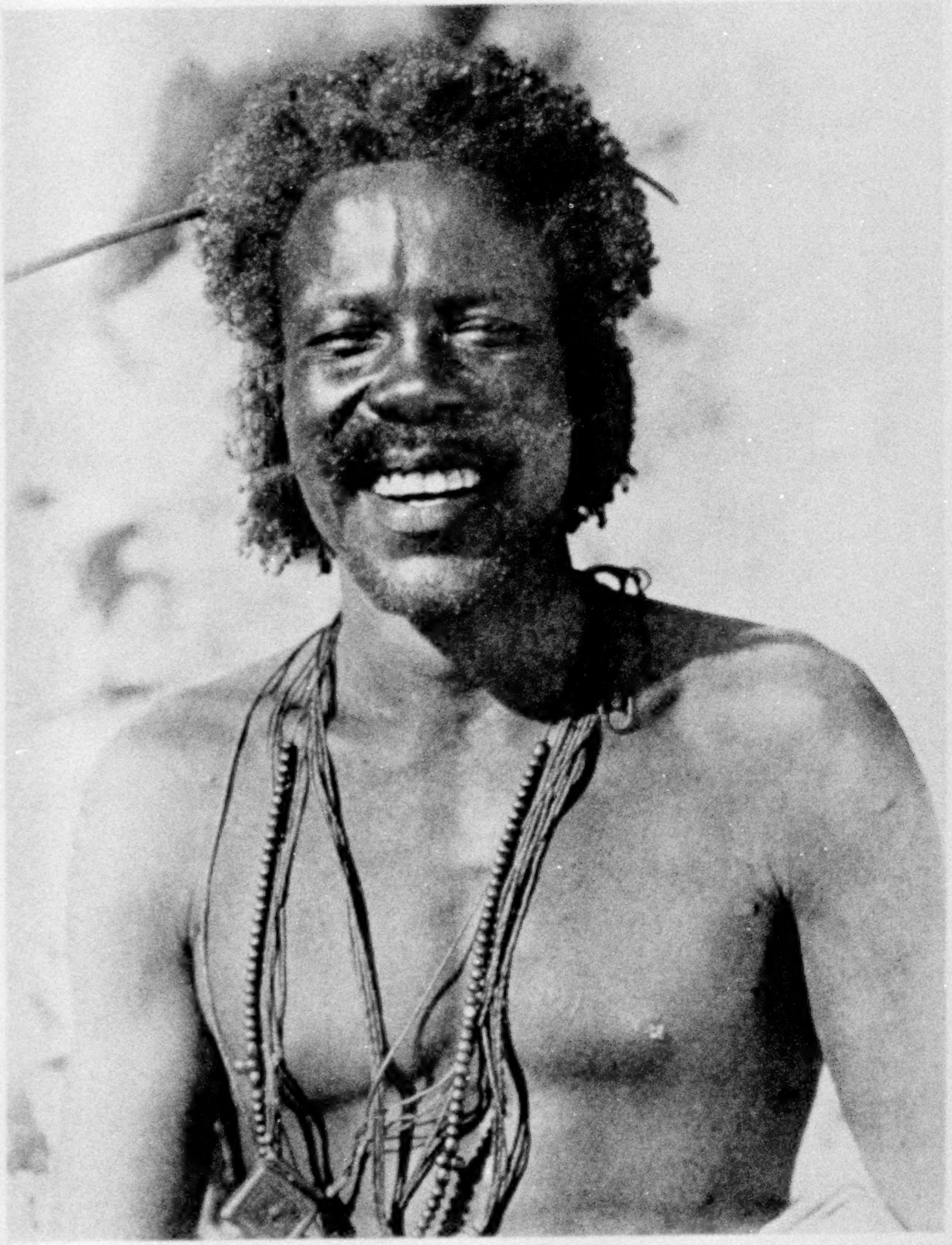
We said to the Nubas: "Oh, but there will be no danger. No one will be hurt. This will not be real, only a game. You and the Messeria will only play together."

"Play!" cried one of the Nuba men.



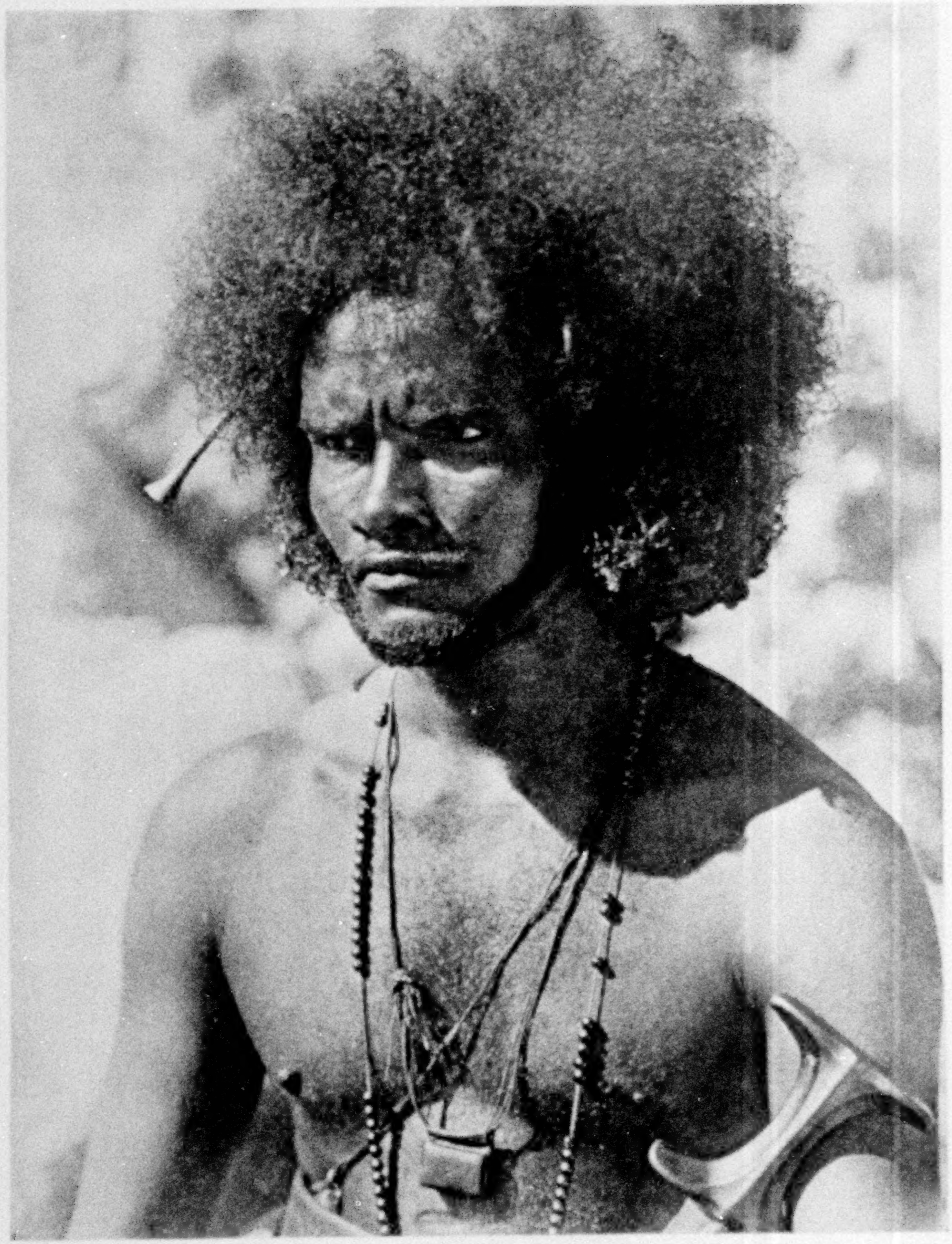
FROM BOYHOOD THE FUZZY IS TAUGHT TO USE THE SWORD

One of the first dances he learns is the sword dance, a violent performance, in which two men leap up and down and cut at each other with their swords, being careful, however, to miss.



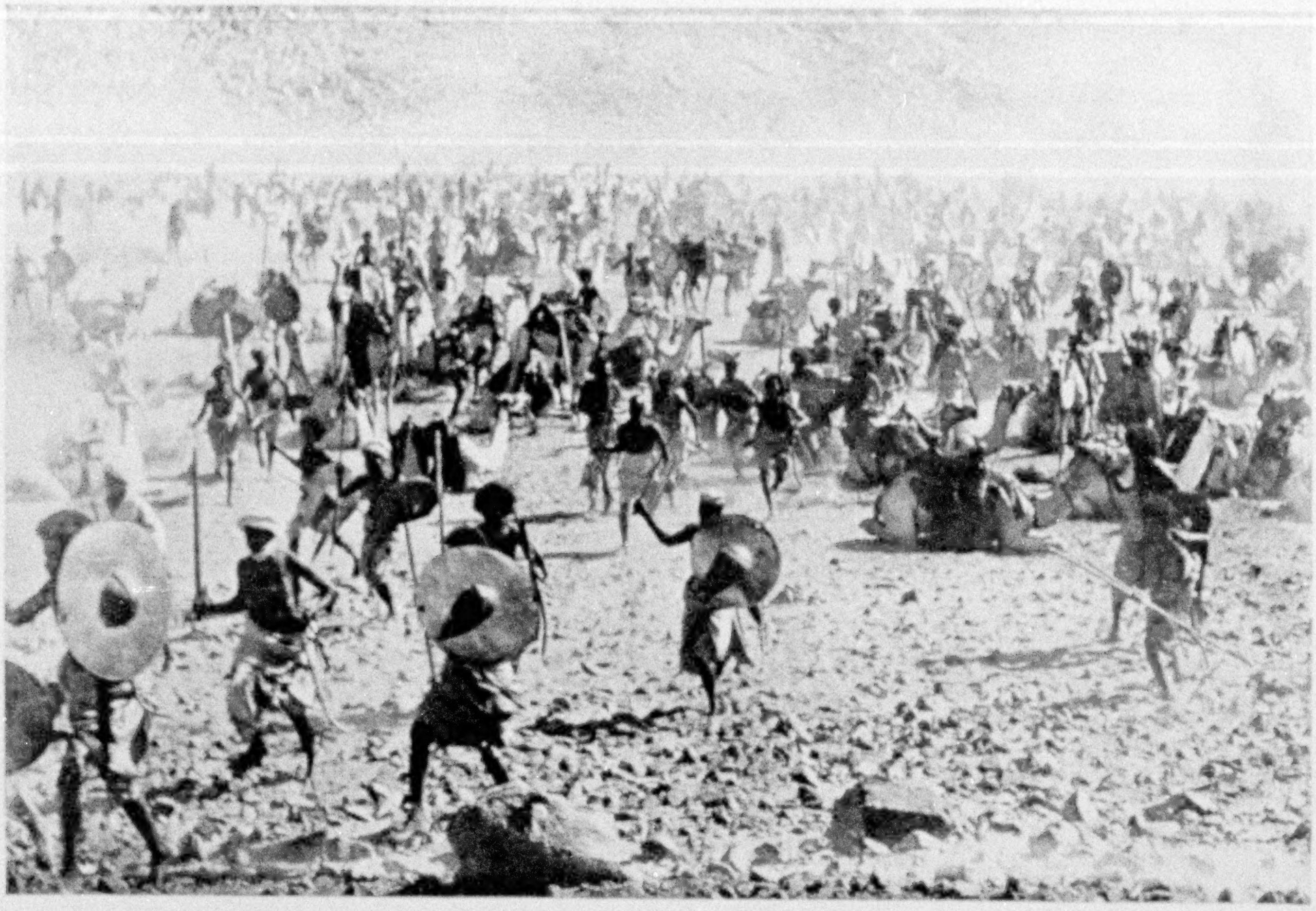
ONE OF AFRICA'S "TALLEST AND FINEST OF MEN"

More than 2,000 years ago Herodotus identified the Beja family of tribes, to which the Amarar belongs, with the handsome Macrobii, and this Fuzzy-Wuzzy still bears out his description.



THE FUZZY'S "'AYRICK 'EAD OF 'AIR"

The peculiar mop is held in place by being soaked in sheep fat. The long pin of ibex bone, sometimes silver-mounted, is used to scratch at the numerous tiny residents of the big headdresses.



THE FUZZIES DISMOUNT TO CHARGE INTO A SHAM BATTLE

When they go into a fight, they obtain greater freedom in arm action by stripping to the waist and wrapping the upper part of their flowing garment about their middle.

"These Messeria will not play. They will kill us. We know them."

The Nazir promised to control his men, but I could not help remembering what he had said that very morning as he had watched the armed column of his spearmen ride down the path to camp.

"When we used to ride like that the vultures would gather and fly along to accompany us. They knew they could expect food." And then he shook his head sadly at these present degenerate times.

However, we decided that, after all, we had no place in our picture for such a raid, and called it off, to the great chagrin of the Nazir.

At last one day there was a great giving of sugar and cloth, and we were off to leave the Messeria behind us and go many hundreds of miles away to the eastern Sudan.

AMONG THE FUZZY-WUZZIES

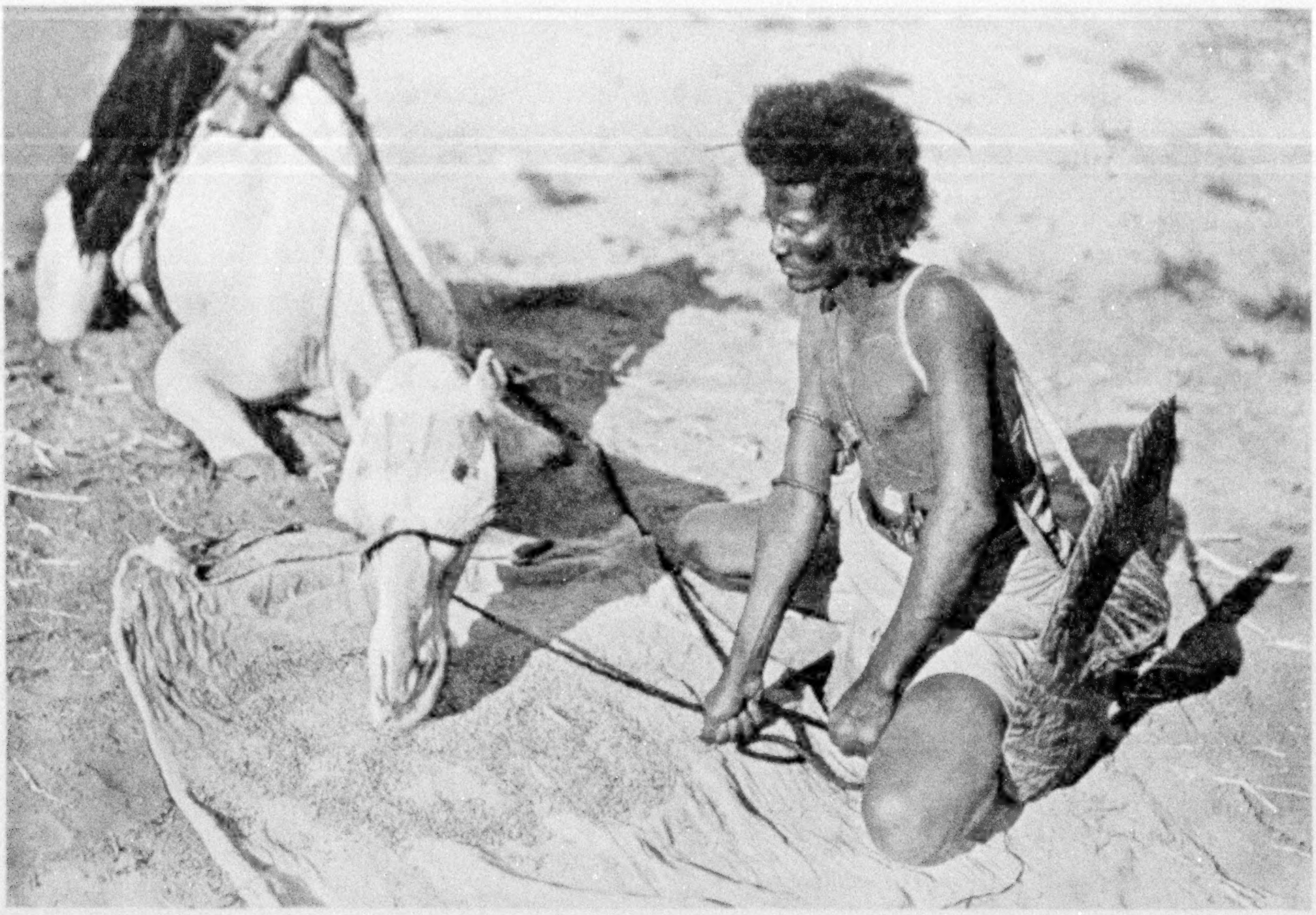
Now here, where the Red Sea Hills look down over that treacherous body of water from which they have gained their name, live the most famous of all the Sudan fighting tribes. In the long years of conflict with the British around Suakin, when this old slave port was the only foothold which the whites were able to maintain on that coast, the British Tommies gave them the name of "Fuzzy-Wuzzies" because of the enormous heads of hair of the young warriors of the tribes. Of them Kipling wrote:

We've fought with many men acrost the seas,
  An' some of 'em was brave an' some was not.
The Paythan an' the Zulu an' Burmese;
  But the Fuzzy was the finest of the lot. . . .

So 'ere's *to* you, Fuzzy-Wuzzy, at your 'ome in the Sudan;
You're a pore benighted 'eathen, but a first-class fightin' man;
An' 'ere's *to* you, Fuzzy-Wuzzy, with your 'ayrick 'ead of 'air—
You big black boundin' beggar—for you broke a British square!

Actually these Fuzzies belong to three tribes—the Hadendoa, the Beni-Amer, and the Amarar. No one knows much about their ancient history, but they are supposed to be of the original Hamitic people of this coast. Though now Mohammedans, many of their customs and their language are quite distinct from the Arabic.

They well deserve the reputation for courage which Kipling gave them. Thou-



TEACHING TABLE MANNERS TO THE CAMEL

When a Fuzzy feeds his mount, he usually spreads a cloth and lets the animal eat delicately from it. This prevents the grain from being scattered.

sands of them, more than once, though armed only with sword and shield, charged across the open desert against the concentrated fire of rifle and Maxims. Once started on a fighting charge, only death could stop them.

But we had read and were told that, in addition to a reputation for courage, they were to this very day sullen, quarrelsome, vindictive, and dangerous. Our first request, that we be permitted to live among them and take pictures, was absolutely refused by the British authorities. In the end, however, with the kindness and courtesy continually shown us during our six months in the Sudan, the authorities graciously agreed.

We went out from Port Sudan to a spot on the edge of the hills some 20 miles away, where we pitched our tents near a little stone house built some years before by the engineer who had arranged for piping water down to the town. There we waited.

The chief who had conferred with the British Deputy Governor and District Commissioner at Port Sudan had promised that a hundred of his men of the Amarar tribe, always friendly to the British, even in dervish times, would come in. Instead of 100, more than 500 rode in.

They were as fine-looking a crowd of fighters as I have ever seen. Every man was dressed in white robes and was mounted on a camel; nearly every one carried a cross-hilted Crusader sword and a heavy round shield of elephant or rhinoceros hide. Most of them had straight features and were erect and athletic-looking.

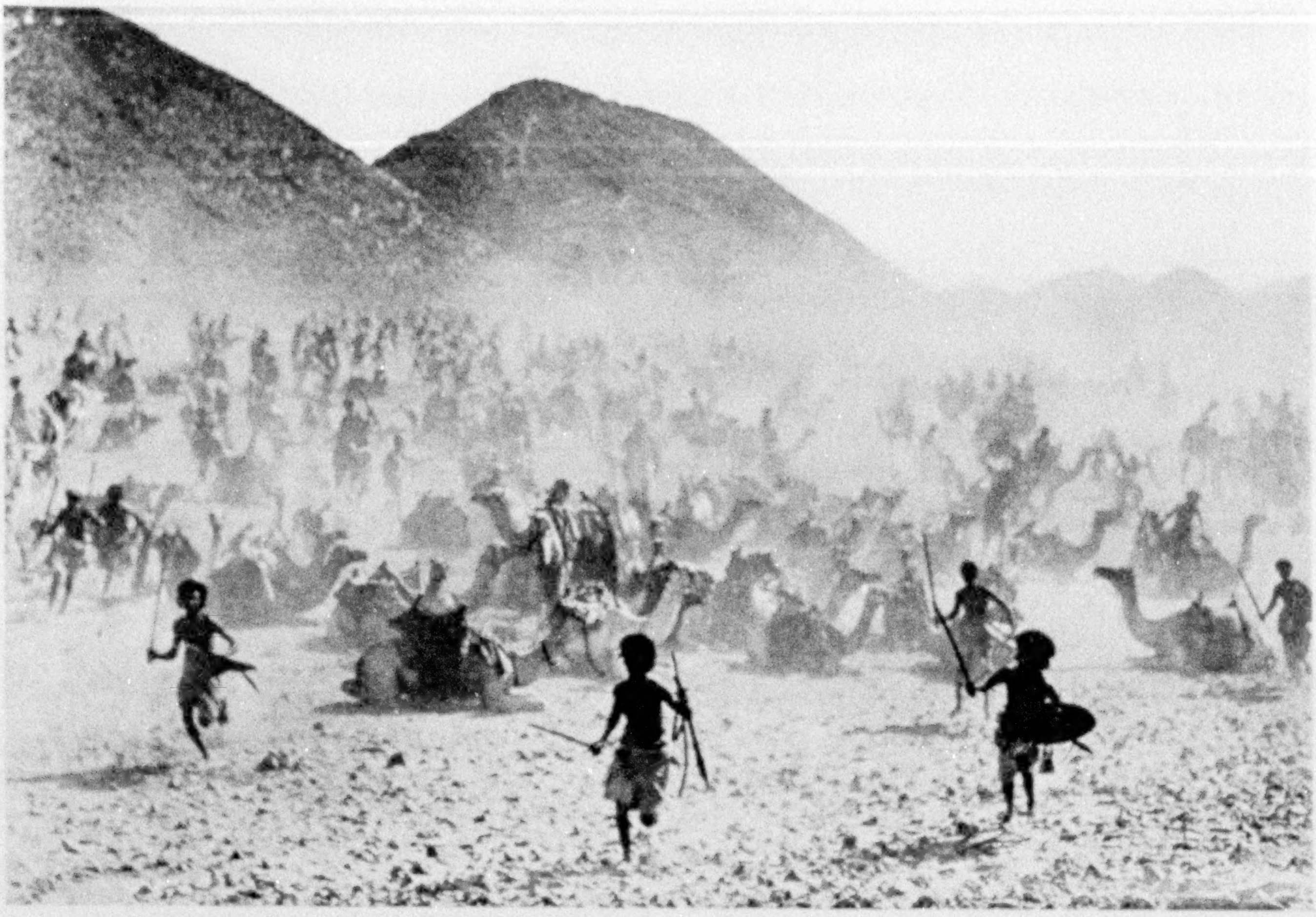
The younger men had heads of hair which would be the pride and despair of any wigmaker for private theatricals.

The swords and shields these men carried at all times were not simply for show. They used them on occasions for fighting. Every boy is taught to fight, and by the time he reaches manhood has become a marvelously dexterous swordsman.

A DUEL WITH STONES

Nearly all major quarrels are settled with the sword, but for minor ones they have an amusing way of dueling.

Two men quarrel. They strip to the waist by wrapping the upper ends of their white cotton robes around their middle, and then each man takes his place within a small circle marked around him in the



FUZZY ON THE RUSH

He well deserves the reputation for courage which Kipling gave him. When once he started on a fighting charge only death could stop him.

sand. The two circles are some yards apart. Then by each man and within the circle is placed a large pile of small stones about the size of baseballs. Each fighter carries his shield in his left hand. Each takes a stone in his right hand. At a signal they let fly at each other, and then keep up a continuous volley of stones.

They may dodge, they may catch these stones on their shields, they may jump over them, but cursed as a coward be the first man who steps out of his circle in retreat. Now, when one knows that with these people stone-throwing is developed to such a fine art that they pursue ibex in the mountains and kill them with stones, one can realize what a fierce affair this kind of fight may amount to.

A stone duel between two men can be serious, but not nearly so bad as when two entire tribes start stone-throwing. We came close to having a sample of this. One day we had taken a picture of our 500 warriors riding by on their camels, and were on our way back to camp, when we were startled to hear a tumult in a near-by gorge. We rushed down to find a couple of hundred of our Fuzzies stripped to the waist—a sure sign of battle—and about to attack each other both with stones and swords.

Luckily, we succeeded in quieting them before real fighting started.

If anyone is killed in such fights as these, a blood feud starts which is difficult to stop. Sometimes it can be arranged by the payment of blood money, but frequently relatives of the dead man will hunt down any member of the killer's family and cut him to pieces. And they are not particular as to how or when. They are as pleased as not to catch him while asleep.

But, despite these reputed qualities, we found the Fuzzies to be good fellows, and the six weeks or so we spent with them were very happy ones to us. We left the Sudan with only pleasant recollections, and certainly we remember it as the best-administered territory in which we have ever traveled.

SUMMER HOLIDAYS ON THE BOSPORUS

BY MAYNARD OWEN WILLIAMS

AUTHOR OF "SEEING 3,000 YEARS OF HISTORY IN FOUR HOURS," "IN THE BIRTHPLACE OF CHRISTIANITY," "UNSPOILED CYPRUS," ETC., ETC., IN THE NATIONAL GEOGRAPHIC MAGAZINE

With Illustrations from Photographs by the Author

AFTER the most severe winter in 67 years, summer has returned to enliven the Bosporus. Where snow lay deep, picnic parties revel in cool shade. Where, on March 1, 1929, floe ice from the Black Sea almost bridged the blue, so that incautious observers assert that a nimble-footed Eliza could have crossed from Europe to Asia, frail craft with lusty outboard motors now skim the sunny bays and diplomatic launches give an aristocratic air to a popularized playground.

Graceful caïques have been newly belted with crimson and gold and at the bobbin-handled, swallow-tailed oars bare-armed girls take wrinkled boatmen for a ride or shout laughing challenge to loud-shirted rowing crews.

Al fresco restaurants occupy the emplacements of once powerful batteries, their guns destroyed. Freedom from military restrictions has turned the whole 18-mile strait into a suburban bathing beach and picnic ground.

For trippers and commuters alike, the Bosporus begins at Galata Bridge, Constantinople's Grand Central, whence comfortable steamers depart seventy times a day. One may live in Istanbul for months without seeing a train. In fact, one must take a ferry to reach a truly Turkish railway. But caïques and *chirkets* are as essential as gondolas in Venice.

When snowdrifts delayed the trams and buried whole rows of taxicabs in the city streets, we walked; but when the Black Sea ice confined the Bosporus boats to their piers, business was disrupted.

LATE ARRIVALS SCRAMBLE FOR TICKETS, CAKE, AND RAKI

For all its infamous currents, changing moods, and adverse winds, the Bosporus is our most reliable highway. How better see it than by joining the happy throng and week-ending along its waters? Moslem, Hebrew, and Christian will each lend us a holiday—and their company.

The *Mendicant Monk*, already loaded far beyond its quota of 1,060 passengers, awaits late comers, who are scrambling for tickets, having their shoes shined, or buying ring-toss loaves sprinkled with sesame, comic journals satirizing each other in New Turkish and Greek, hazelnuts and raisins, sponge cake and bottles of *raki*—for times have changed since Commodore William Bainbridge, who first carried the American flag up the Bosporus to the Black Sea, served fresh water from four continents to his abstemious Moslem guests. Drinking alcohol in Turkey is no longer a Christian prerogative.

We glide smoothly away from our pier, thread our way through the commercial port off Galata Quay, and begin to buck breeze and current. From a coquettish sailboat, a bobbed-haired girl in a bright bathing suit broadcasts a friendly wave. Passengers, failing to notice that cushions have transformed this wind-swept forward deck from second class to first, argue about fares.

RUINS OF PALACES RECALL STIRRING HISTORY

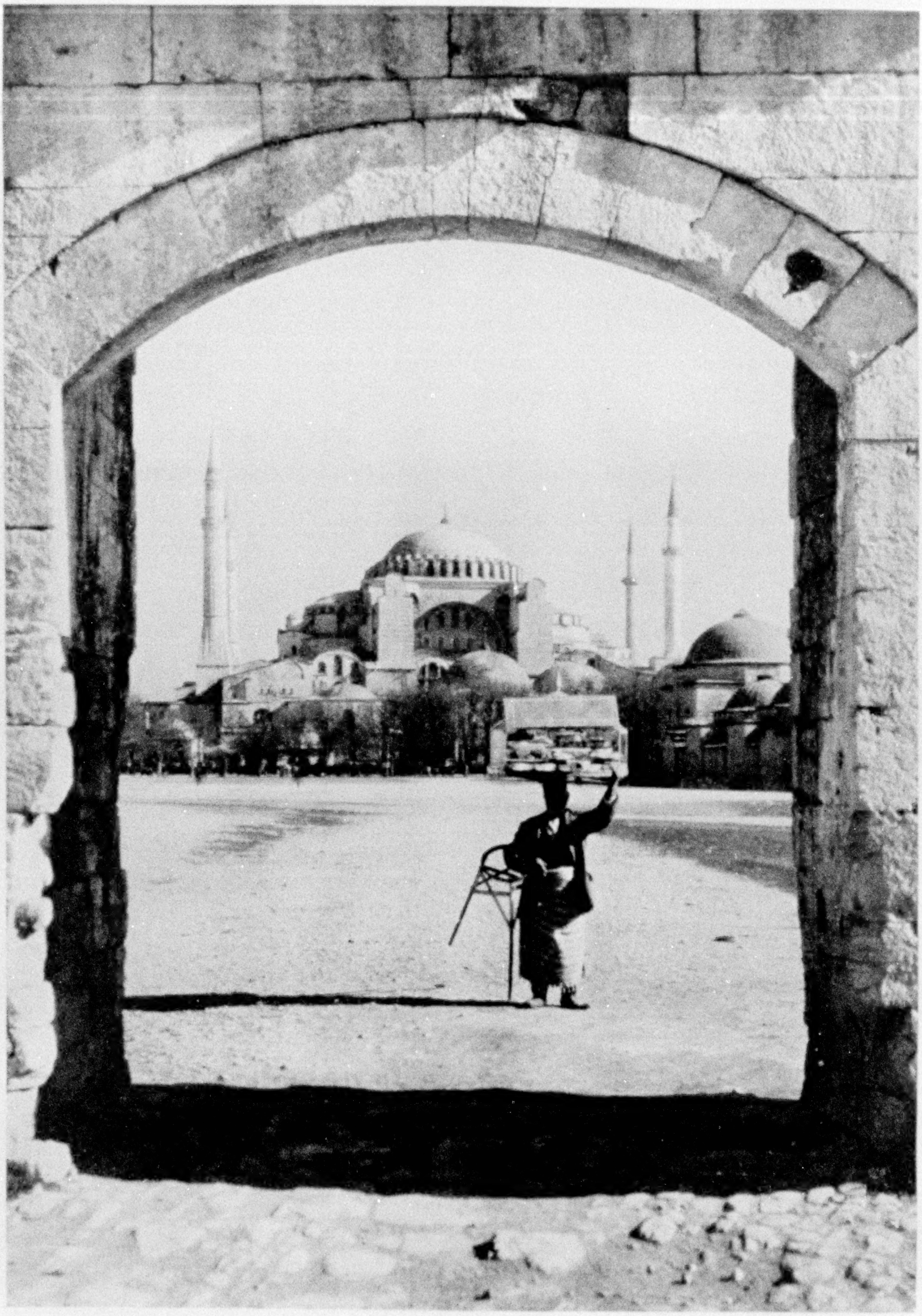
We pass the long façade of the Palace of the Filled-in Garden, near where Mohammed's 68 war galleys started on rollers over the ridge of Pera to the Golden Horn, during the siege of Constantinople centuries ago. Then follow minor palaces, sometimes duplicated because a henpecked polygamist had to treat two wives alike—or an absolute autocrat, two daughters.

High on the hill and hidden amid greenery behind double walls is the Yildiz Kiosk (Palace of the Star), formerly a retreat of the deposed Abdul Hamid and, for a few hectic weeks, a gambling casino.

Beside us is the roofless ruin of Cheragan, on which Abdul Aziz lavished his time and money until he stubbed his toe on its threshold. For 28 years the prison of Murad V and Parliament House for a few months, it was burned in 1910.

Beyond another ruin, half-buried in soft coal, we come to the Middle Village (Orta Köi). A crescent of caïques and sailing ships curves around to where a beautiful

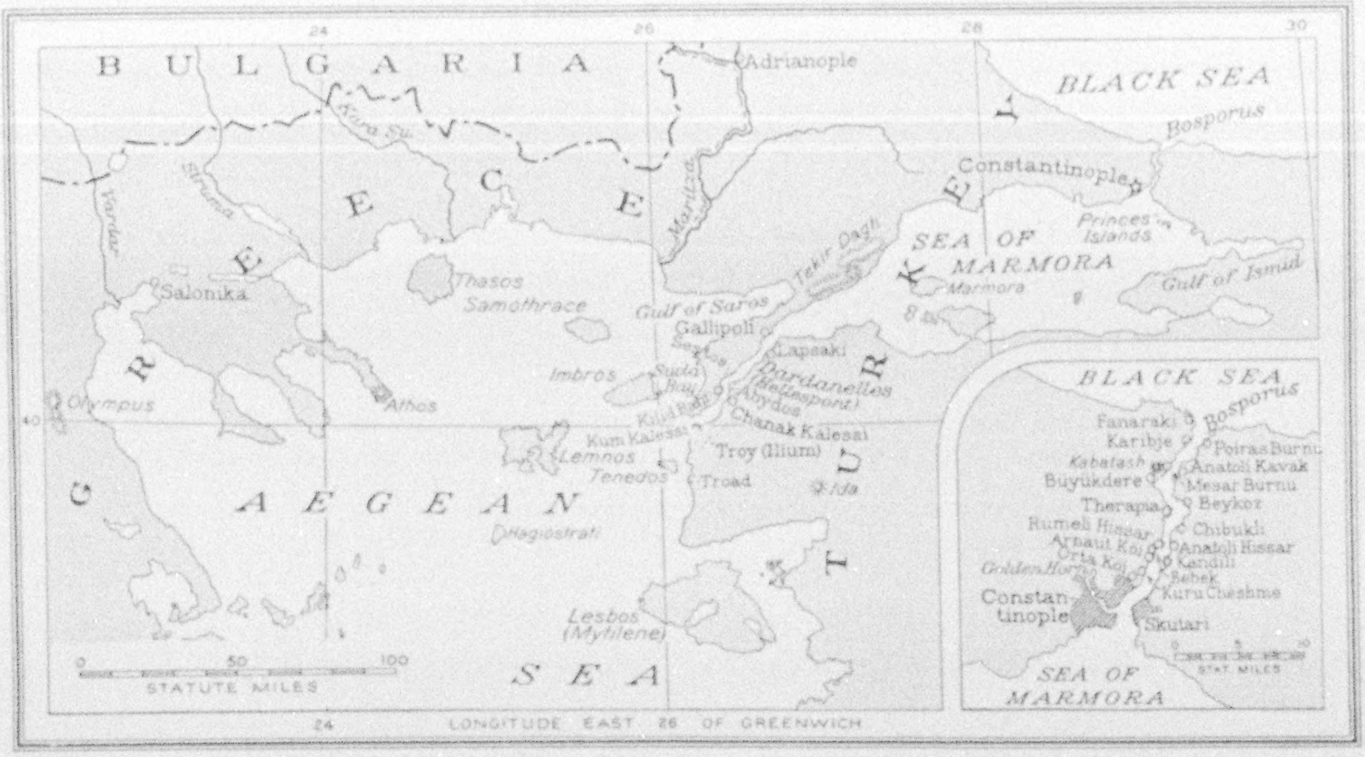
XUM



© Publishers' Photo Service

TO MANY PEOPLE, CONSTANTINOPLE MEANS NOTHING BUT SANCTA SOPHIA

To thousands who have never even heard of the city's battered walls, and who have never formed a mind-picture of the romantic Bosporus, the name of this venerable structure is a familiar sound. Its confused and shapeless pile is bounded by four massive minarets and encased in gigantic buttresses.


24
26
28
30
BULGARIA
Adrianople
BLACK SEA
Bosporus
Kara Su
Struma
Vardar
GREECE
Maritza
TURKEY
Constantinople
Princes Islands
SEA OF MARMORA
Marmora
Gulf of Ismid
Tekir Dagh
Salonika
Thasos
Samothrace
Gulf of Saros
Gallipoli
Sestos
Lapsaki
Imbros
Suvla Bay
Dardanelles (Hellespont)
Abydos
Kilid Bahr
Chanak Kalesai
Olympus
Athos
40
Kum Kalessi
Lemnos
Tenedos
Troy (Ilium)
Troad
Ida
AEGEAN SEA
Hagiostrati
Lesbos (Mytilene)
0
50
100
STATUTE MILES
LONGITUDE EAST 26 OF GREENWICH
BLACK SEA
Bosporus
Fanaraki
Karibje
Poiras Burnu
Kabatash
Anatoli Kavak
Buyukdere
Mesar Burnu
Therapia
Beykoz
Rumeli Hissar
Chibukli
Arnaut Koi
Anatoli Hissar
Orta Koi
Kandili
Golden Horn
Bebek
Kuru Cheshme
Constantinople
Skutari
0
5
10
STAT. MILES
SEA OF MARMORA

Drawn by A. H. Bumstead

THE BOSPORUS SEPARATES EUROPE FROM ASIA

Along both shores of the strait connecting the Black Sea with the Sea of Marmora are many villages, villas, castles, and the ruins of castles. Its beauty spots, once visited exclusively by the aristocracy of the Turkish Empire, are now picnic grounds for the humbler citizens of the Turkish Republic.

jewel-box mosque admires itself in a water mirror troubled by swimmers.

A stone quay provides a stream-side seat at noon or sundown for old ladies in black and young girls in rainbow hues—Turkish Carmens from an ex-palace tobacco factory. As the ship's wave sweeps along, one party after another retreats before it and then returns to the serious business of zephyr-smelling.

On the edge of Asia, Skutari (recently rechristened Üsküdar in the New Turkish), backed by its cypress-forested Field of the Dead, has dropped astern, and opposite us is the dazzling palace of Beylerbey, which welcomed the Empress Eugénie to rooms copied from her own in the Tuileries.

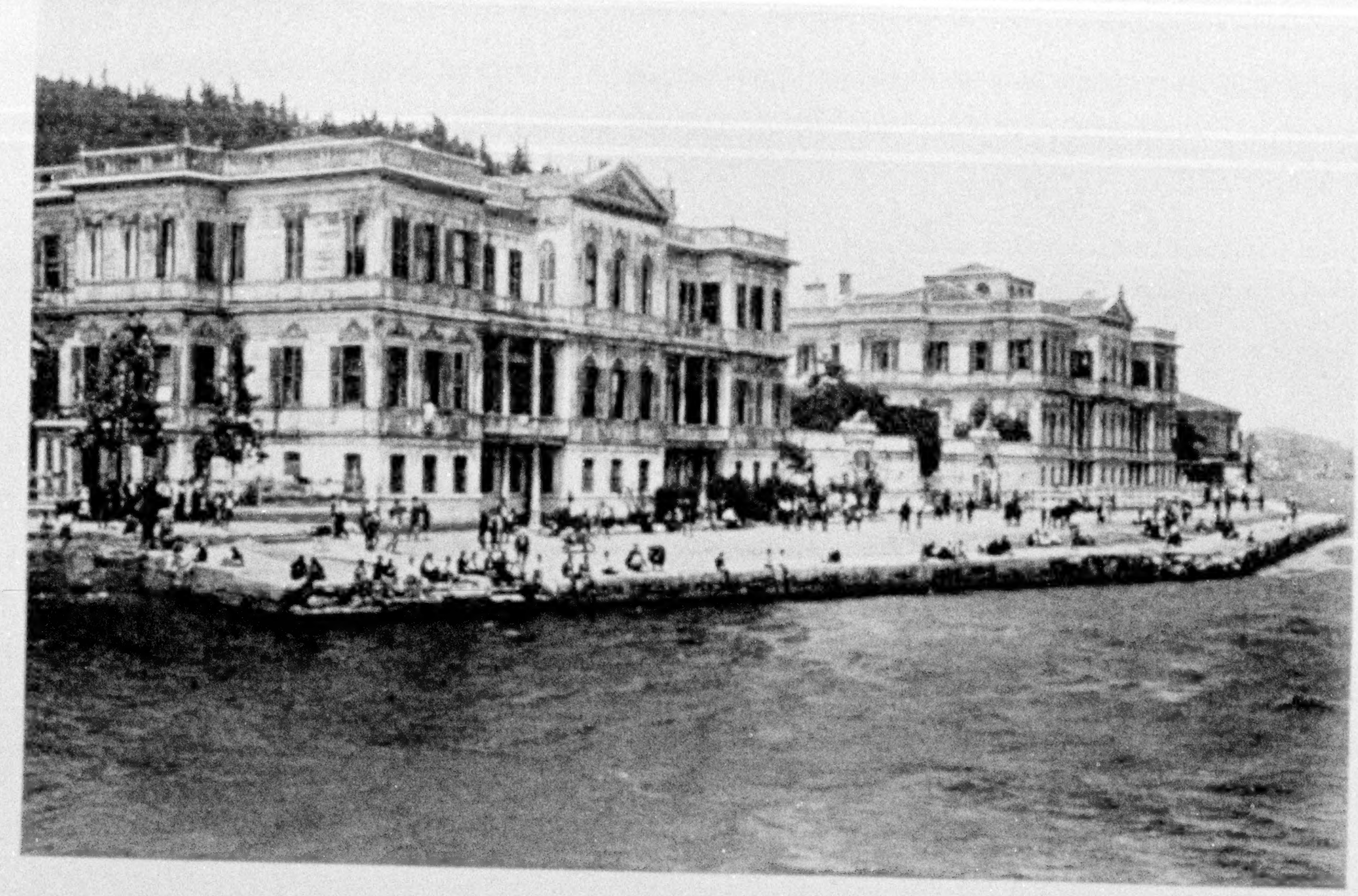
THE MIDDLE BOSPORUS IS THE FAIREST SECTION

The Bosporus, "in flow a river and in depth a sea," may be roughly divided into three zones: Palaces, Pictures, and Picnics. Our course here changes from northeast almost to north, and before us lies the most picturesque region, the middle Bosporus, lacking Stamboul's matchless skyline, but itself the fairest part of this varied panorama.

Above Kuru Cheshme, a pleasant clump of trees and many prostrate Hebrew tombstones mark a point from which there is a marvelous view up-Bosporus (see Color Plate II), with the Albanian Village (Arnaut Köi) at our feet, the Beacon Village (Kandili) across the swift current, and the European and Asiatic Castles in the distance. Stylite hermits, here perched on pillars, suffered bodily cramp while their eyes were tempted to a Sybarite feast.

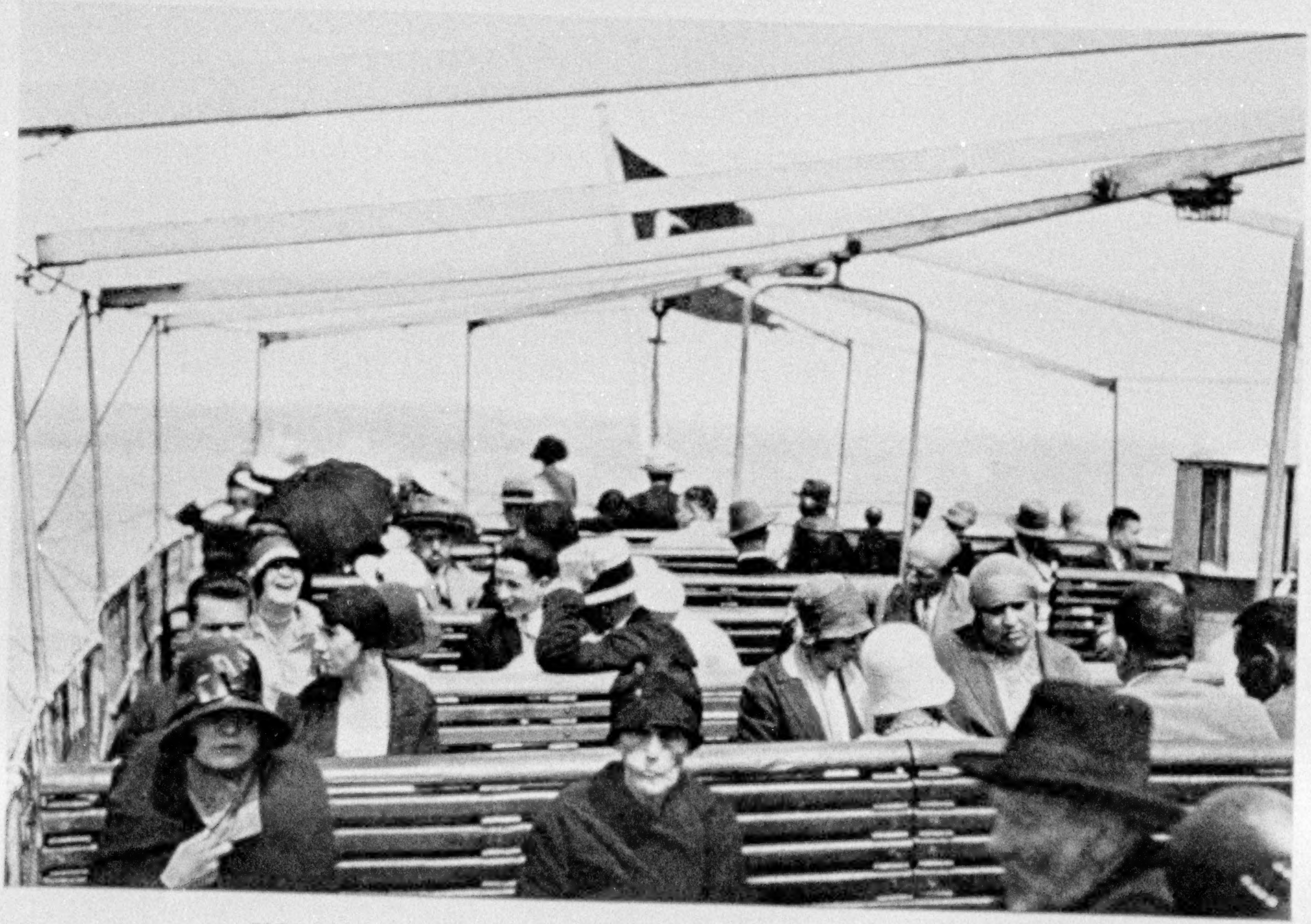
Behind the neglected Hebrew graves rise five splendid buildings of the Constantinople Woman's College (also spoken of as the American College for Girls), a great educational institution and the only one of its class east of Vienna. Thirty-five girl graduates, nine of them with unbobbed hair, have just returned to Armenian, Bulgarian, Greek, Turkish, Hebrew, Russian, Rumanian, and British homes—diverse in race and religion, but fellow alumnæ of one Alma Mater.

At Arnaut Köi (now Arnavutköy), the current is so savage that a signalman with red and green flags is constantly on duty, indicating how closely the steamers may with safety shave this point. Small boats, unable to stem the tide, are hauled by towlines into the backwaters of Bebek.



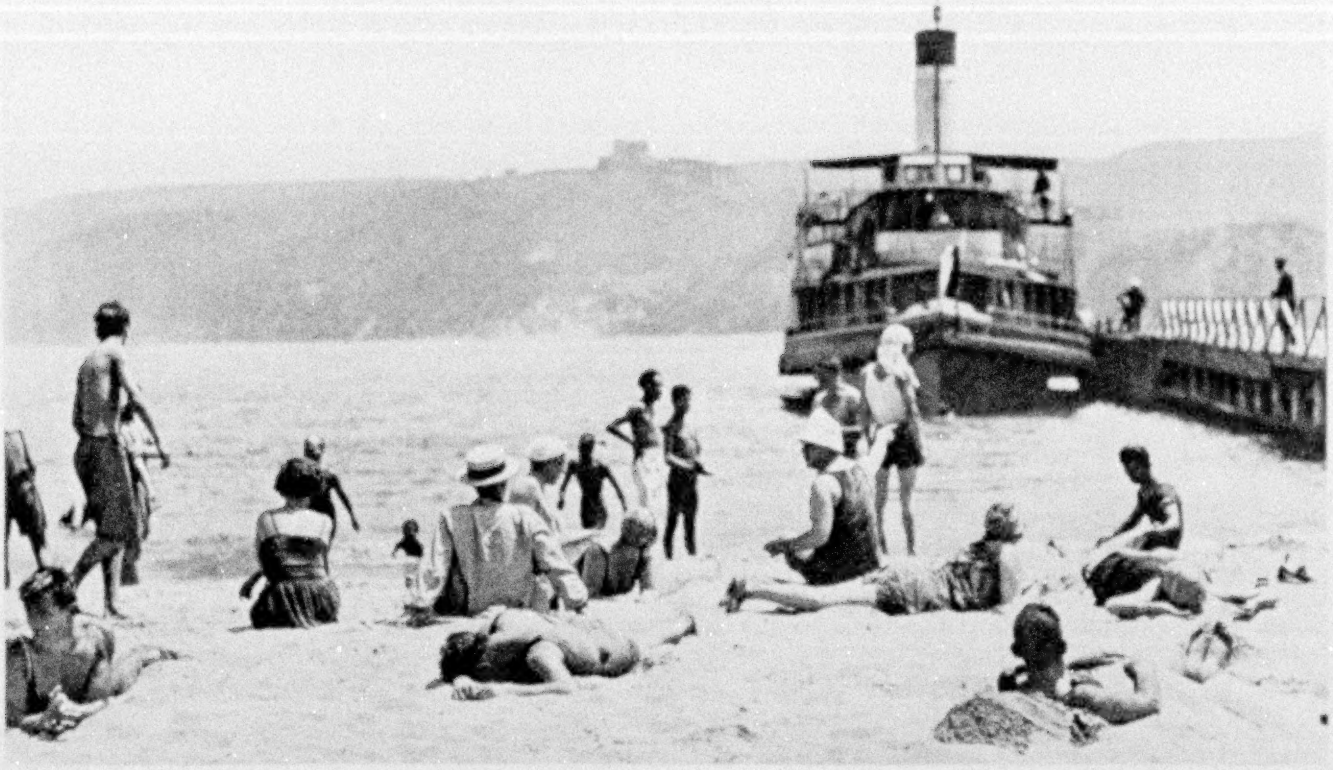
TWIN PALACES AT ORTA KÖI PERPETUATE FAMILY DIFFERENCES

They were built for two daughters who could not live together, and so were provided with similar homes separated by a high wall. In later days the palaces became a tobacco factory, and at noon the quay along which heavily veiled ladies once strolled was the picnic and lunch resort of factory women. The left-hand palace has been destroyed by fire (see page 507).



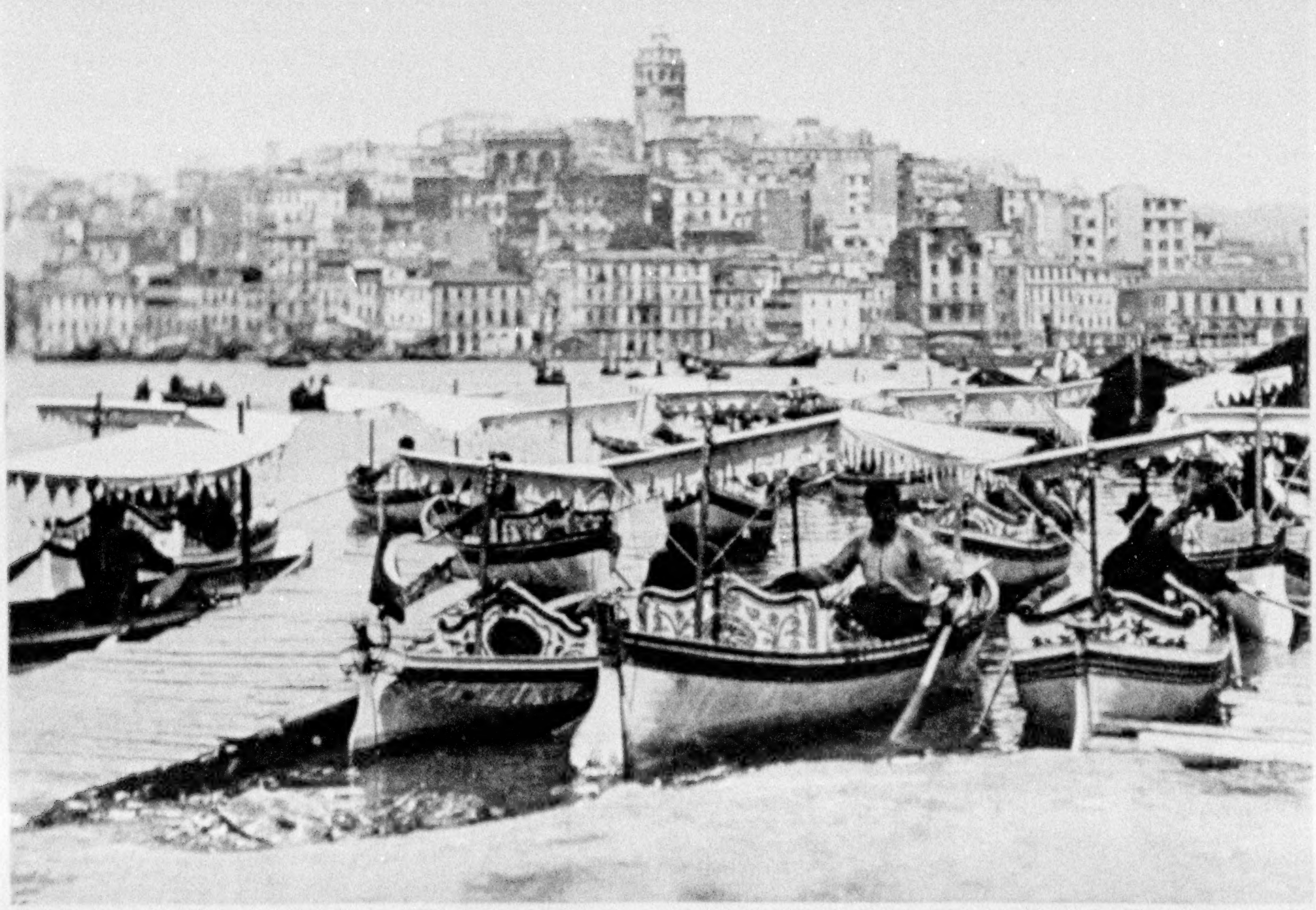
HOLIDAY-MAKERS BOUND FOR THE PRINCES ISLANDS

Many prosperous Constantinople Turks maintain summer homes for their families on this Sea of Marmora group, and commute back and forth. At rush hours these efficiently operated boats are as packed as a New York ferry. The ride takes an hour or more from Galata Bridge (see illustration, page 504).



THE BOSPORUS IS A SUMMER PLAYGROUND

Not so different from beach scenes in America or Europe, and the rush for the late-afternoon boats home is just as great. In the background, across the Bosporus, is the Genoese Castle, built by the Byzantines and assailed by Harun-al-Rashid, Caliph of Baghdad; by the Genoese, and by Bayezid I, the Thunderbolt.



BRIDGE AND FERRY COMPETE FOR PATRONAGE

It is a mystery why there should be such an active ferry service just above Galata Bridge. It costs only half a cent to walk across, or half a cent in addition to the tram fare to ride across; yet a constant stream of rowboats makes Constantinople's water front as lively as Venice. This is the landing stage at the Stamboul end. Old Galata Tower in the distance.

On opposite sides of this conveniently treacherous stream were palaces for Seraglio graduates, ex-wives of the sultans.

TAG DAY FOR THE RED CRESCENT—TURKEY'S RED CROSS

Beside the Bosporus at sunset time—it was the Fourth of July and Tag Day to boot—a girl pinned a bit of paper to my lapel, while her equally charming companion stuffed my contribution into a Red Crescent box.

Just then a taxi approached, its flag marked "Bosh," meaning "Nothing in it." The gentle and youthful hand that had just decorated my coat now steadied itself against my shoulder while a narrow white shoe rose to the grasp of a manicured hand.

"Monsieur, let's take a taxi. My feet are tired!"

Seated with these newly emancipated daughters of the East, I asked, "Are you Turkish?"

"But yes! Why not?"

Nor could I say.

AN OUTPOST OF AMERICAN EDUCATION IN THE NEAR EAST

Bebek, at the end of the street-car line, is a place of rare hominess, sheltered in winter and cool in summer. On the hill behind it, occupying the most magnificently located of campuses, is Robert College. Long an outpost of American education in the Near East, it faces its greatest opportunity, now that Turkey, personally and officially, is looking to the West, if not for leadership, at least for inspiration (see Color Plates I and VI).

At a time when Turkey's own schools are making admirable progress, Robert College commands high respect and distinguished patronage. Its engineering graduates, especially, are in great demand.

From an abandoned dervish cloister near the Place of Martyrs, a natural amphitheater slopes down a narrowing valley to a proscenium of ivy-clad gray wall, terminating in stately towers, built in five months and still standing after five centuries.

For a stage, there is the blue Bosporus; for a back drop, the softly rolling hills of Asia, with a stream-split village, where the Sweet Waters of Asia flow into the strait between the scarlet hulls of a native shipyard and the gray walls of the Asiatic Castle (see Color Plate IV, lower).

No view so stirs the occidental mind as that where the towers of the Rumelian Castle frame the fairest edge of Asia. But, to the eye alone, this splendid bastile is best seen at dawn from beyond the reflecting pool of the unruffled Bosporus. Great umbrella pines arch above the view of battlemented walls. Whether they form the name of the Conqueror or not, they are a mighty monument to his energy (see Color Plates I and III).

Above Rumeli Hissar a line of villages parallels the general direction of the S-shaped Bosporus.

Our ship passed the Kiosk of Kalender, now flanked by a public tennis court and crowded with Turkish orphans. Once this place was called the Bay of the Fox. Nor does its diplomatic record belie the name. Before that dread winter of 1812, when the Marseillaise was drowned out by the Russian National Hymn at the walls of burning Moscow, Turkey, abetted by England, here made peace with Russia, thus releasing the Tsar's best troops for the defense of the Kremlin.

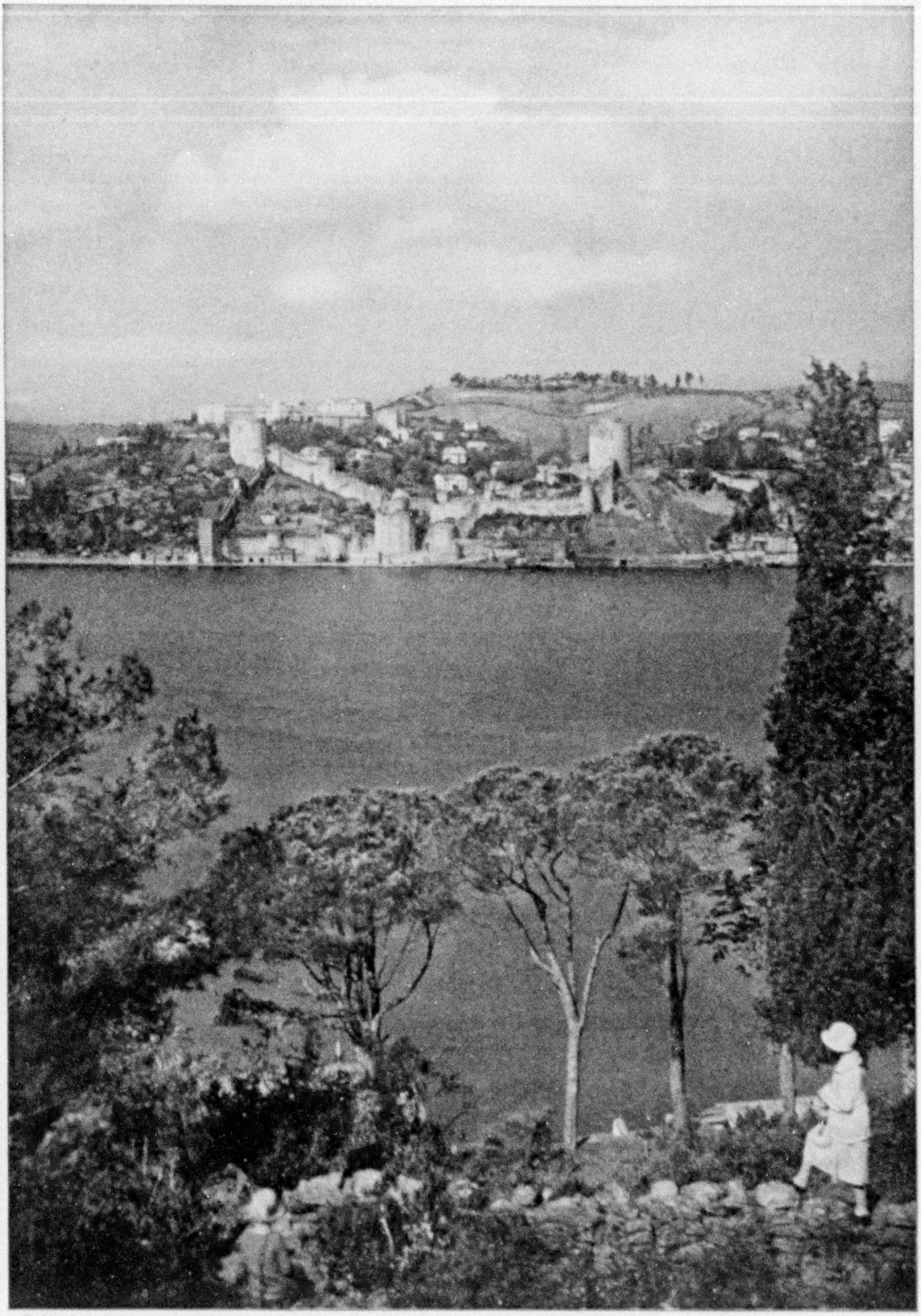
Village of summer embassies and hotels, show place of *nouveaux riches,* and rendezvous of idlers, Therapia (now Tarapya) is as aristocratic as modern life allows, amid high teas and low music.

RUSSIAN MUSIC AND GAY DANCERS

Büyükdere, hydroplane port, is more versatile, beloved by the bourgeoisie and graced by the deeply wooded garden of the Soviet Embassy. Above the landing stage a "Salon Orkestrasi ve Cazband" is soon to start a silk-and-flannel mass milling about to the strains of "Ramona" and "I Kiss Your Hand, Madame."

But that will come only after the real business of the day, eating, is over. The massed green woods between the landing stage and the Cape of the Tomb are private. But back on the slope of Mount Kabatash great trees shade humble "casinos," squealed at by phonographs or enlivened by a gypsy band whose oriental music seems incomplete without a barker, the smell of sawdust, and a striped midway tent.

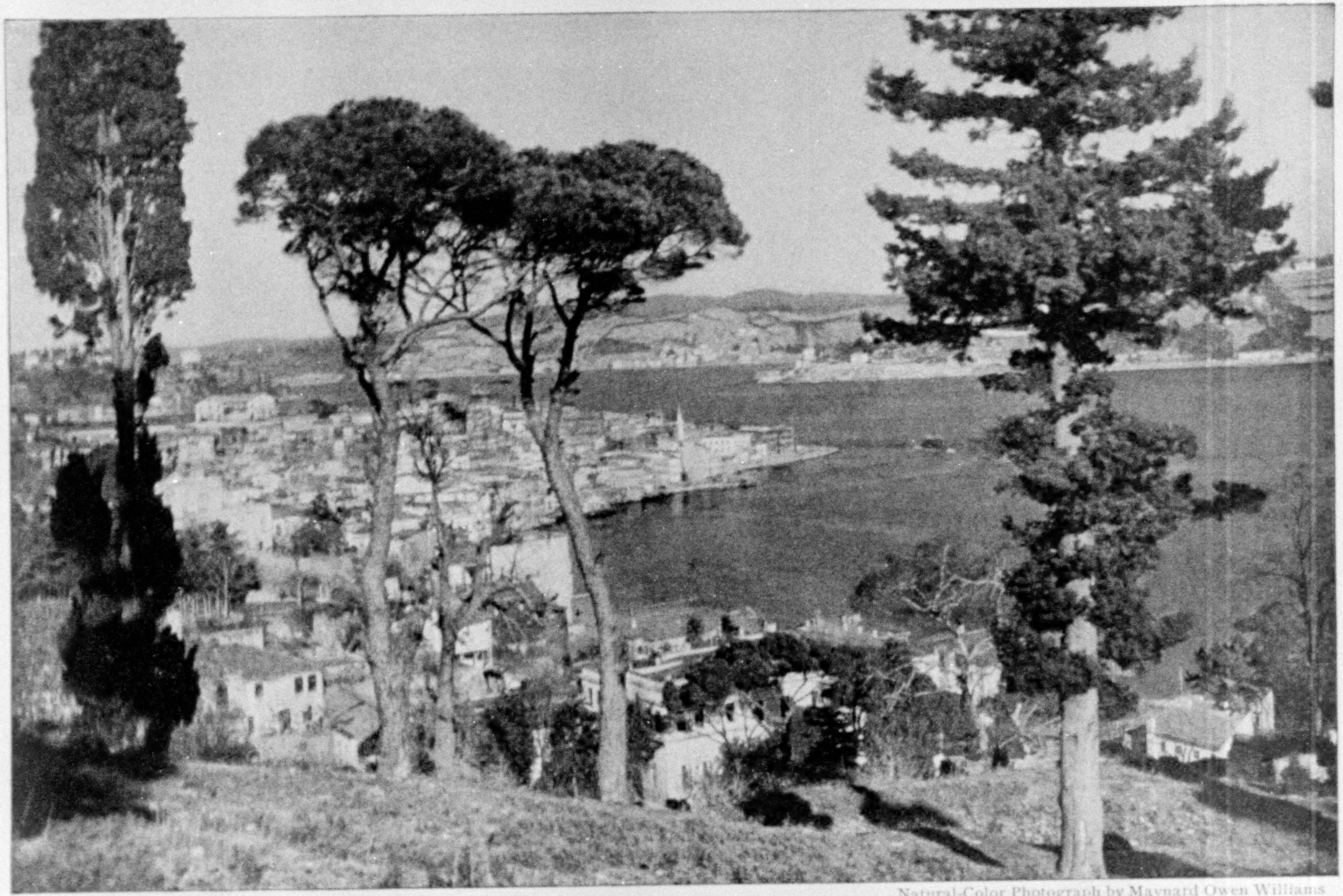
Here a picnic is mere economy. But beyond Büyükdere it is a passion—almost a profession. At Mesar Burnu passengers



© National Geographic Society Natural-Color Photograph by Maynard Owen Williams

LOOKING ACROSS THE BOSPORUS FROM ASIA TO EUROPE

Rumeli Hissar, Mohammed's "European Castle," in the 15th century prevented Black Sea grain from reaching besieged Constantinople; Robert College, its near neighbor on the hill to the left, now carries American education to the changing East.

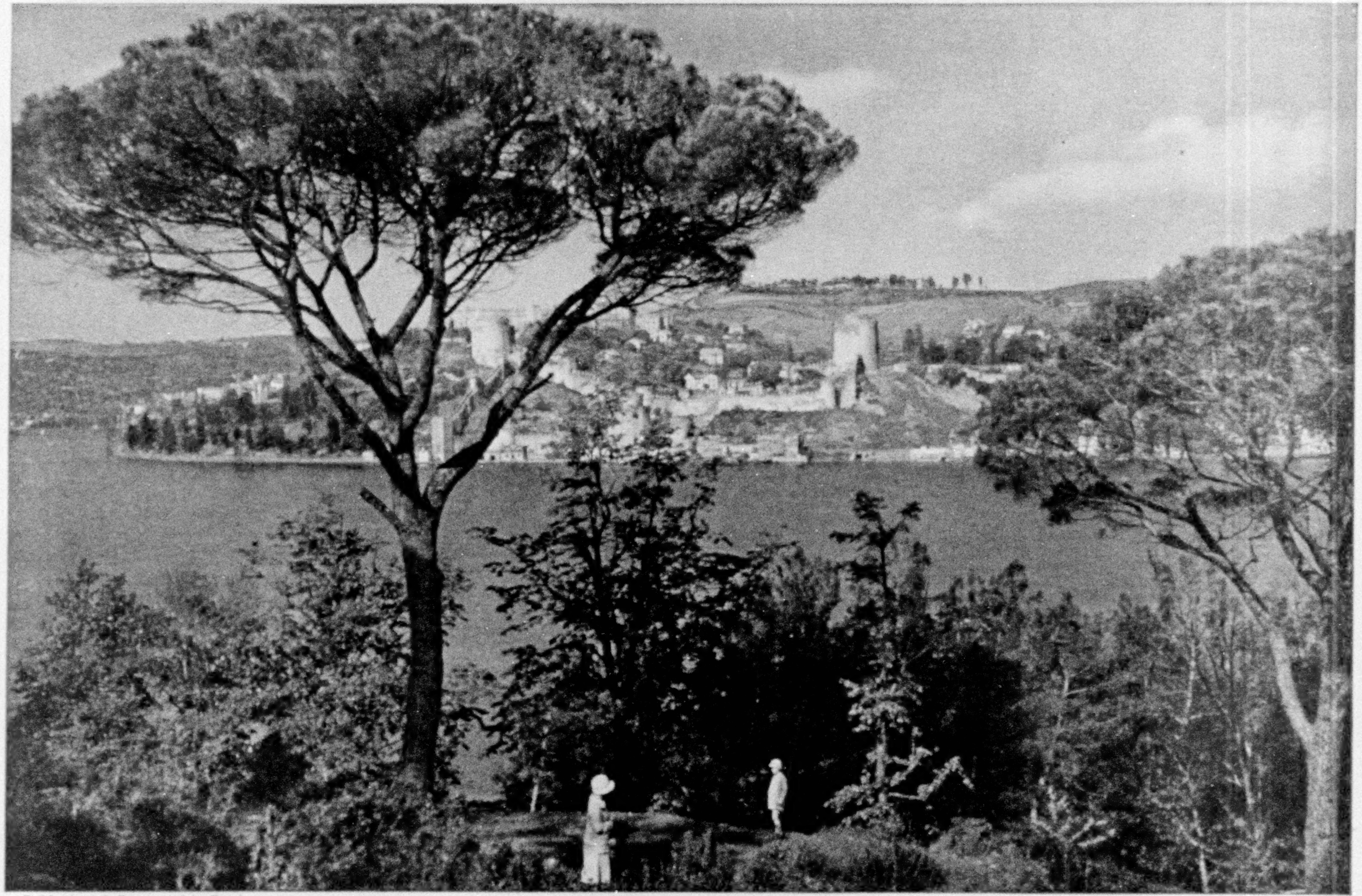


© National Geographic Society

Natural-Color Photograph by Maynard Owen Williams

"TITANIC FORCES HERE RENT EUROPE AND ASIA ASUNDER"

Winding, but parallel, shores direct the Bosporus from cape to cape. At Arnaut Köi, recently rechristened Arnavutköy, a steamer is breasting the strongest current of this narrow 18-mile-long divider of continents. Just below the hill from which this view was taken is the entrance to the Constantinople Woman's College. Near here there were, in olden times, many pillar hermits, among them Daniel the Stylite, who lived on top of a column for a third of a century.

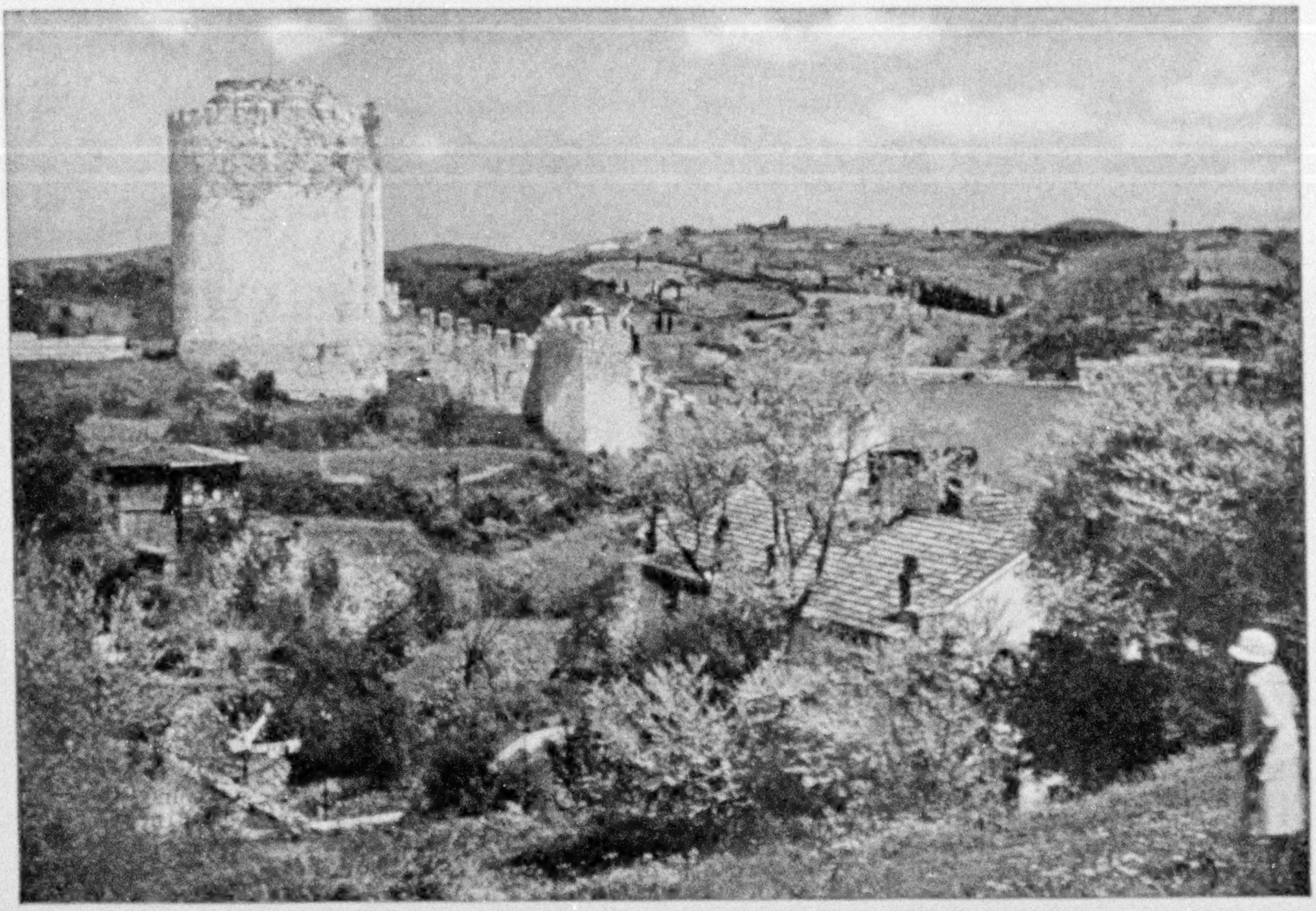


© National Geographic Society

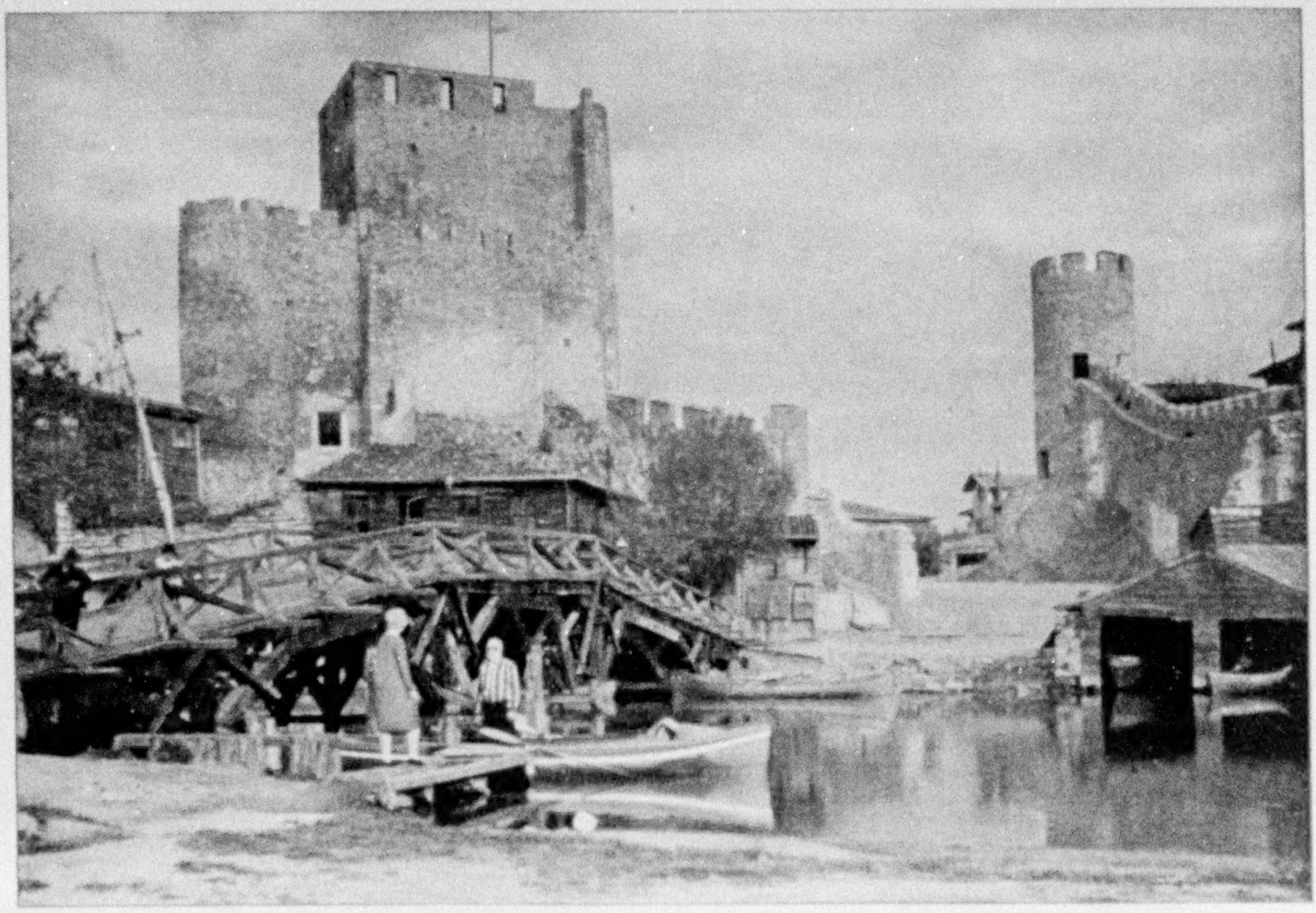
Natural-Color Photograph by Maynard Owen Williams

HERE THE HOSTS OF DARIUS THE GREAT CROSSED INTO EUROPE FIVE CENTURIES BEFORE THE CHRISTIAN ERA

The fortress-castle at the edge of the water is Rumeli Hissar (see also Color Plate I). According to Lamartine, the French poet, the Bosporus provides "the most marvelous point of view which the human eye can contemplate."



JUDAS-TREES ADD A PURPLE NOTE TO GREEN VALLEYS WHICH SLOPE TO THE BOSPORUS FROM THE NORTH TOWER OF RUMELI HISSAR

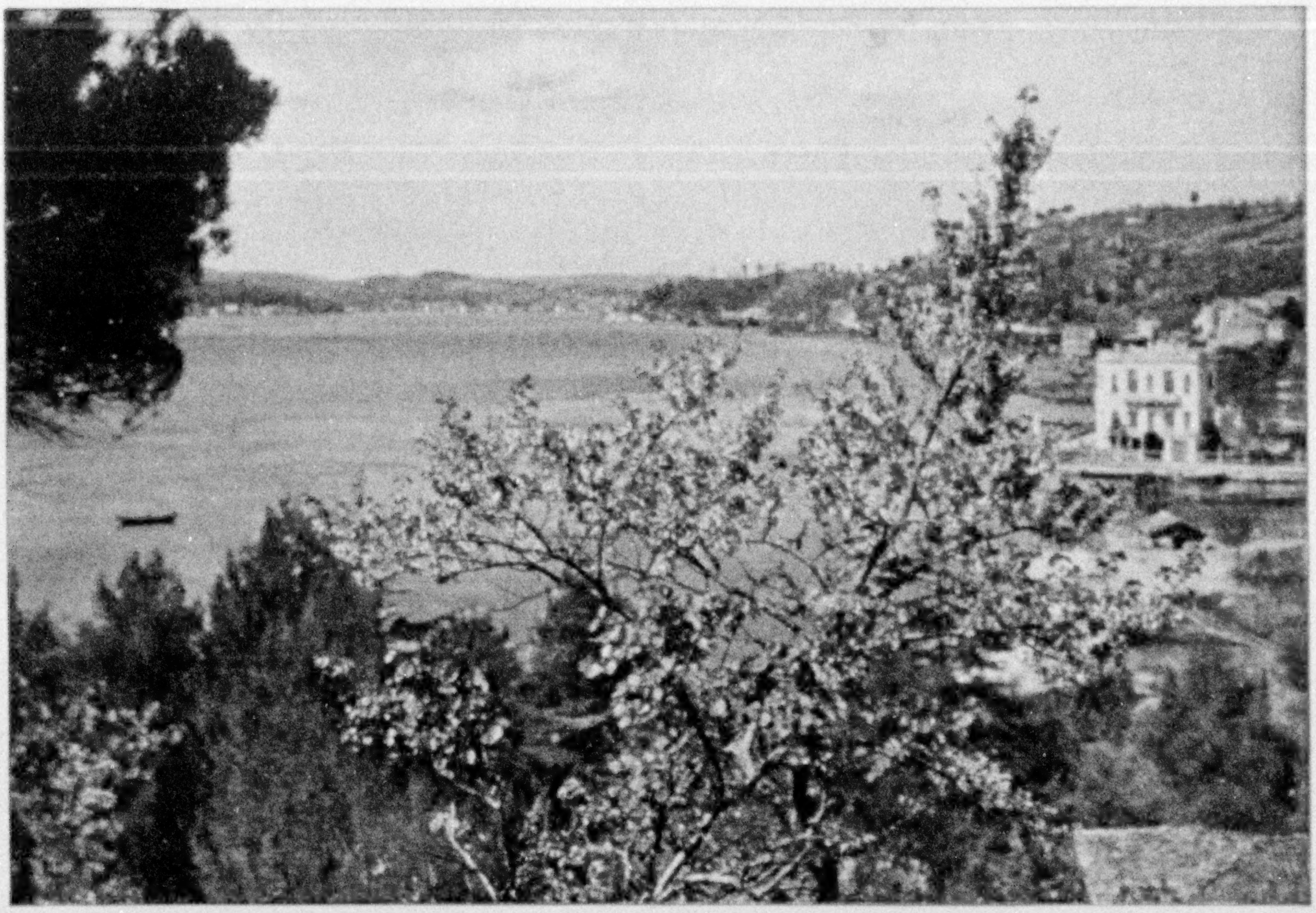


© National Geographic Society

Natural-Color Photographs by Maynard Owen Williams

AT THE FOOT OF THE "ASIATIC CASTLE" RUN THE SWEET WATERS OF ASIA

This quiet stream is no longer the rendezvous of pleasure seekers, but before the World War Constantinople's most select society frequented the spot.



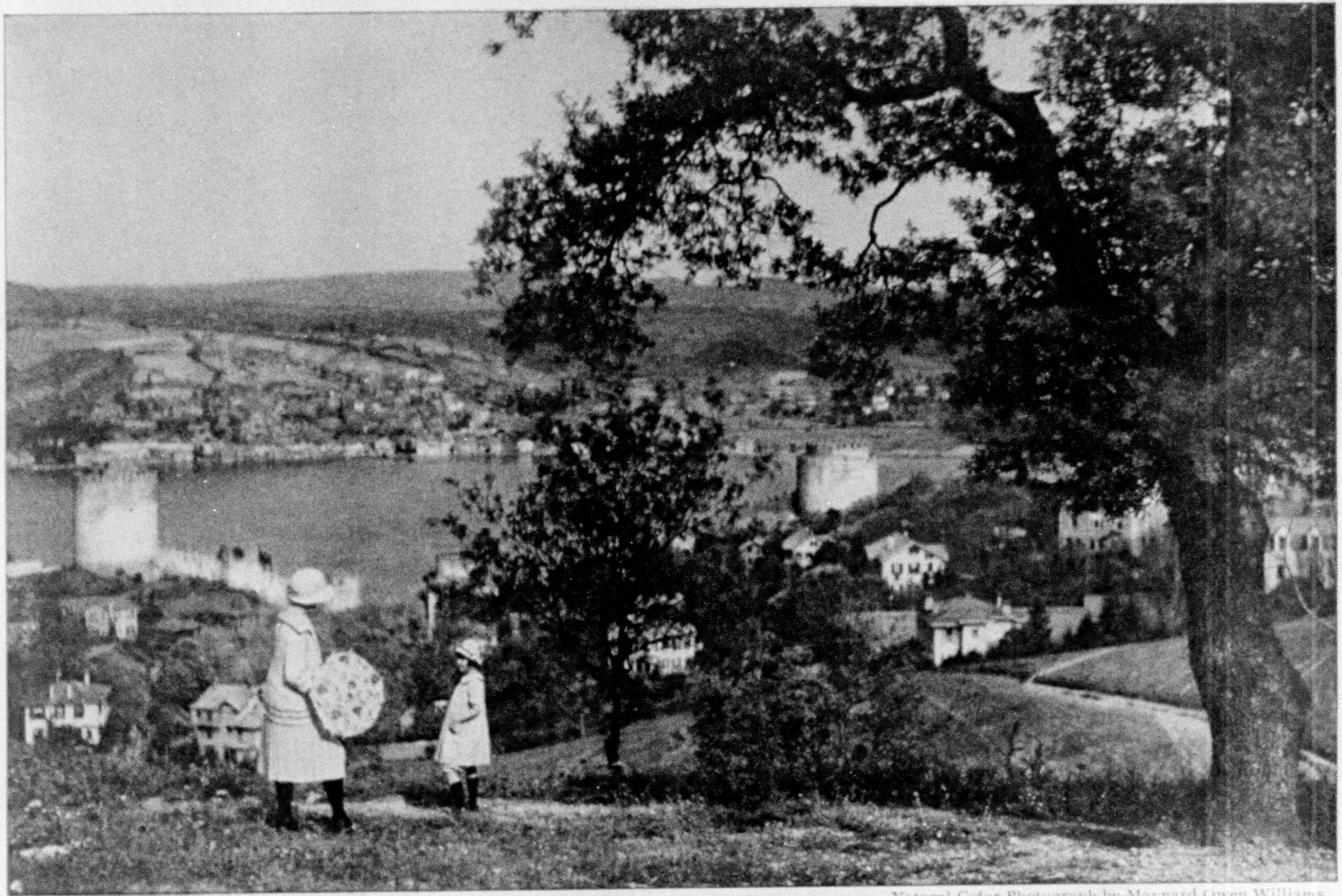
SULTANS OF THE OLD RÉGIME AND THEIR COURTS OFTEN MADE RUSTIC HOLIDAY IN PICNIC GROUNDS NEAR BY

© National Geographic Society

Natural-Color Photographs by Maynard Owen Williams

WEATHERED WOOD FRAMES THIS GARDEN ON THE BOSPORUS

Because Christians were formerly forbidden to paint their houses, natural wood is still used, a fact which in this case does not mar the beauty of the setting.

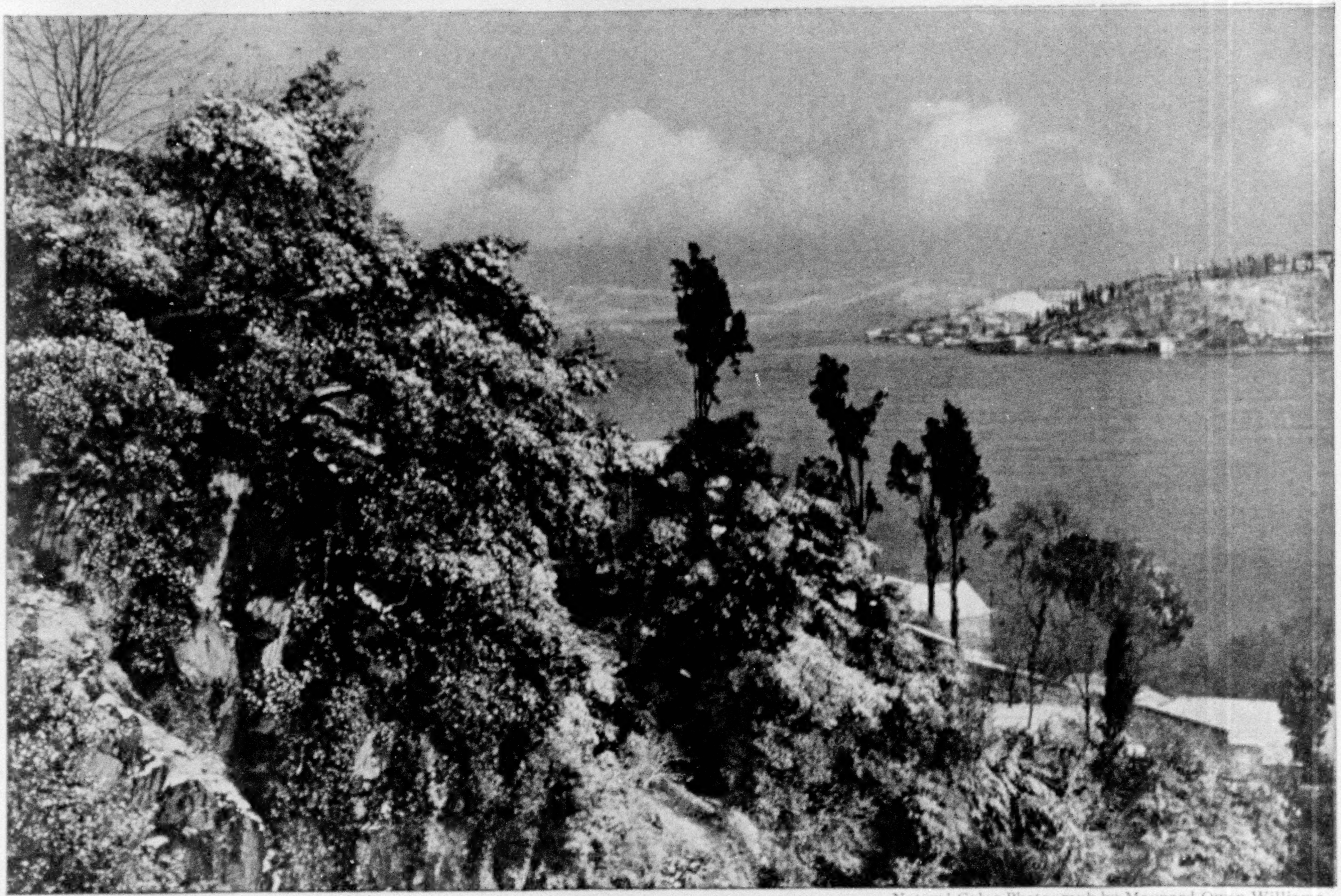


© National Geographic Society

Natural-Color Photograph by Maynard Owen Williams

LOOKING DOWN ON RUMELI HISSAR (EUROPEAN CASTLE) AND HOMES OF ROBERT COLLEGE PROFESSORS

Here the Bosporus is narrowest and just across the water is the castle of Anatoli Hissar (Asiatic Castle), which was first built by Bayezid, 99 years before Columbus discovered America, and later enlarged and repaired by Mohammed the Conqueror. On the right of Anatoli Hissar is the little plain between the greater and lesser Sweet Waters of Asia, once the favorite picnic ground for the Turks under the Sultans (see also Color Plates IV, lower, and V, upper).

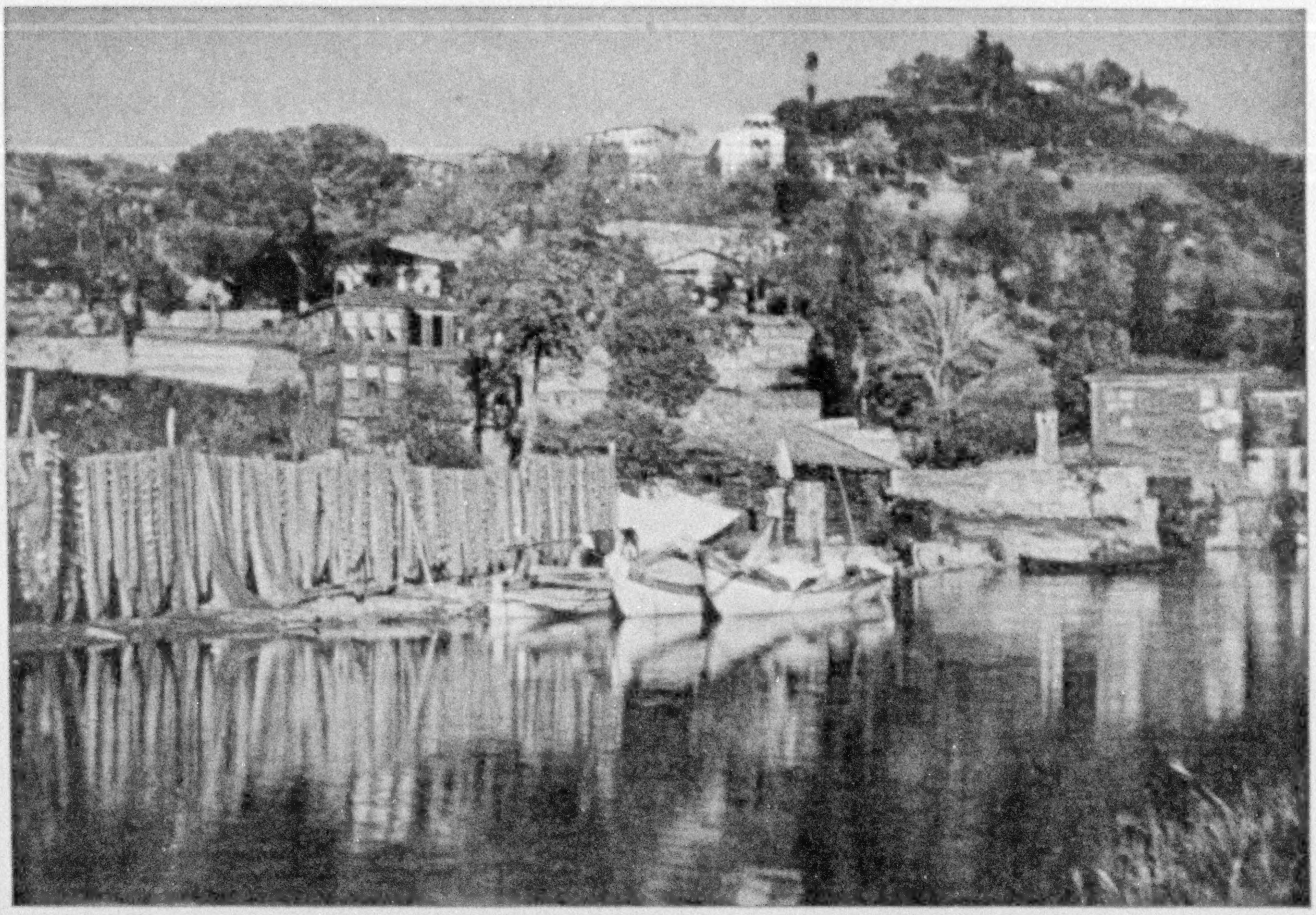


© National Geographic Society

Natural-Color Photograph by Maynard Owen Williams

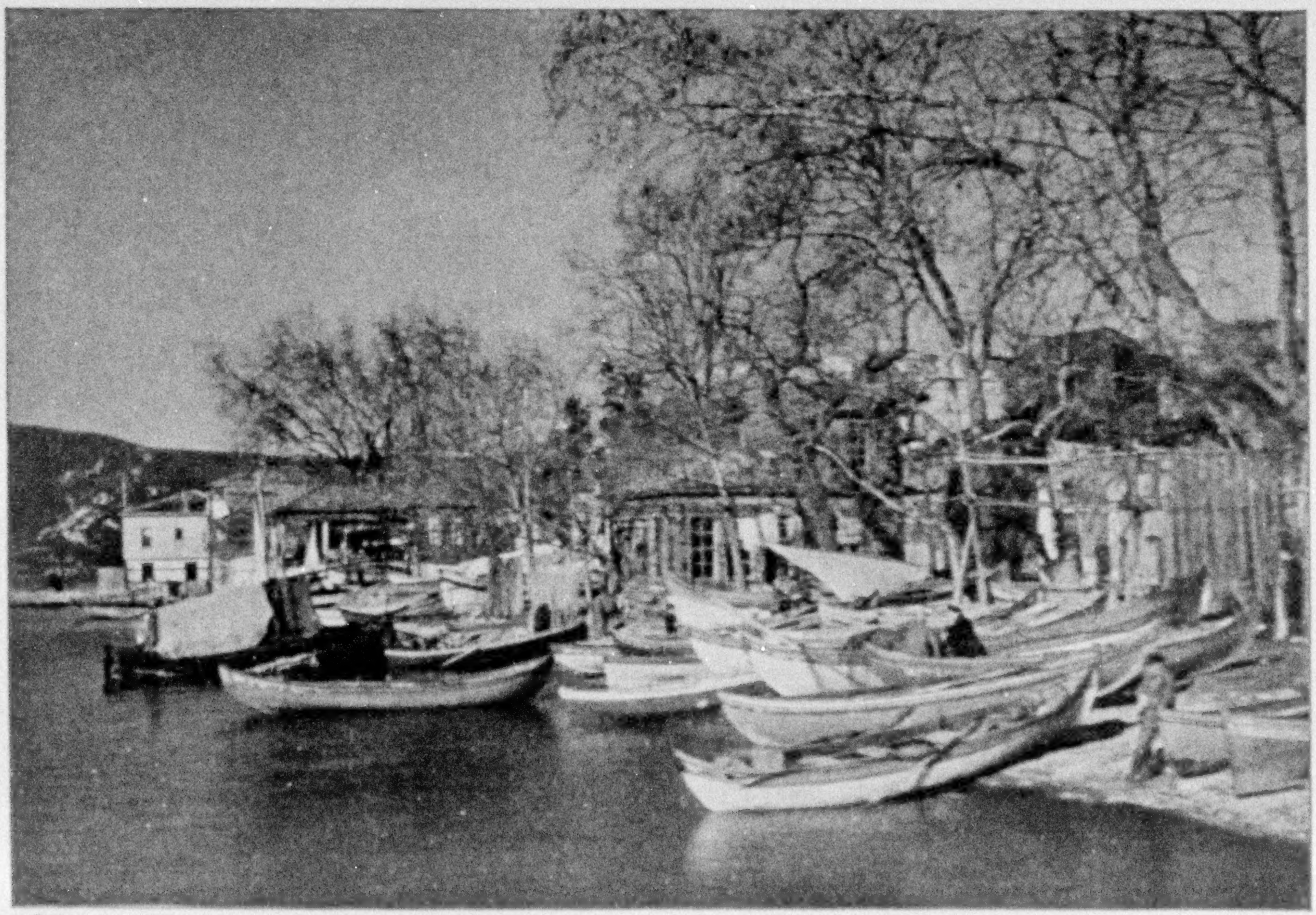
LOOKING UP THE BOSPORUS AFTER A FALL OF SNOW

The view is from a platform known as Darius's Seat, north of the north tower of Rumeli Hissar (European Castle). From this point of vantage the Eastern monarch is supposed to have watched his mighty army cross from Asia into Europe (see Color Plate III).



NETS DRYING ON BANKS ONCE GAY WITH FRIDAY HOLIDAY CROWDS

Where the decorated barges of the nobility formerly plied, the boats of market gardeners and fishers are now to be seen.



© National Geographic Society

Natural-Color Photographs by Maynard Owen Williams

CAÏQUES ON THE BEACH AT ANADOLUKAVAĞI

Until the recent change in Turkish place names, following the adoption of a Latin alphabet (see "Turkey Goes to School," in the National Geographic Magazine for January, 1929) this, the northernmost village on the Asiatic shore of the Bosporus, was known as Anatoli Kavak.

transfer themselves and their many bundles to small carriages drawn by diminutive horses under Russian yokes, some of them shiny with silver. After ten minutes along a splendid road, donkeys and basketmen meet the carriages and a climb begins.

Fathers take their young sons on to red plush saddles between their knees and women employ two human flying buttresses to keep them on their mounts. Your orthodox Turk sees no picnic in pedestrianism. Basketmen bring the voluminous baggage.

The proprietors of Hunkarsuyu could serve meals—and go bankrupt. Instead, they provide terraces, rush-bottomed stools, tables made of a platform, and two "horses," and scores of open fireplaces at which Turkish women, squatting on their heels, may perform miracles. Many a party, disdaining table or chair, spreads its matting and eats from a common dish as if on the open steppe.

But "civilization" is almost as portable as the utensils of the nomad, and a sign requests the patrons "not to play their graphophones while the Turkish orchestra is performing."

YOUNG TURKS ENJOY A STRENUOUS HOLIDAY

This gastronomic paradise, centered about a tiny spring, must not blind one to the fact that many young Turks pass a strenuous holiday. One of a jolly group of young men, like tourist cabiners, carrying knapsacks and athletic equipment to a deserted northwest tip of Asia, expressed his feelings:

"It's all right for you to go where the people are. But we live in the city and we want to get as far away as possible."

"What will *you* do?" I asked.

"Now we'll cross to Anatoli Kavak (Anadolukavagi) and row for a while. Then we'll all take a swim. For lunch we'll climb to the Genoese Castle, where there is a breeze and we can talk to the bearded people. (That's always interesting.) Then we tramp to Poiras Burnu and swim and play games. At evening time we'll hire a fishing boat for two dollars and sail down to Stamboul through the twilight."

At the "European Poplar," a sign on the fortress wall points to a "gasinosi" with "jazband," and Altinkum, steamer terminus, is a red-and-white striped resort where another "cazband" plays beside a gun-emplacement dance floor amid scores of bright umbrellas.

To many Turks, public bathing does not appeal. Not gregarious, they seek out secluded bits of beach near the informal dressing room of rock or shrub.

WHERE JASON AND HIS "ARGO" TURNED THE TRICK

Above the signal station at Büyük Bay the drear landscape is deserted. Tramping this rocky path, we met no urbanite on the way to the tiny beach where Karibje hides behind a dismantled fort. At Fanaraki we stood beside the marble pedestal atop the one surviving Cyanean Rock.

According to legend, if a ship ever ran the gantlet past these geologic heavyweights, the shifting rocks were to become stable. A more stable island one could not ask for now. Before the great lighthouse and fog gun were built at Fanaraki, mariners used a marble pillar on this island as the forward sight in their aim to enter the Bosporus (see page 503).

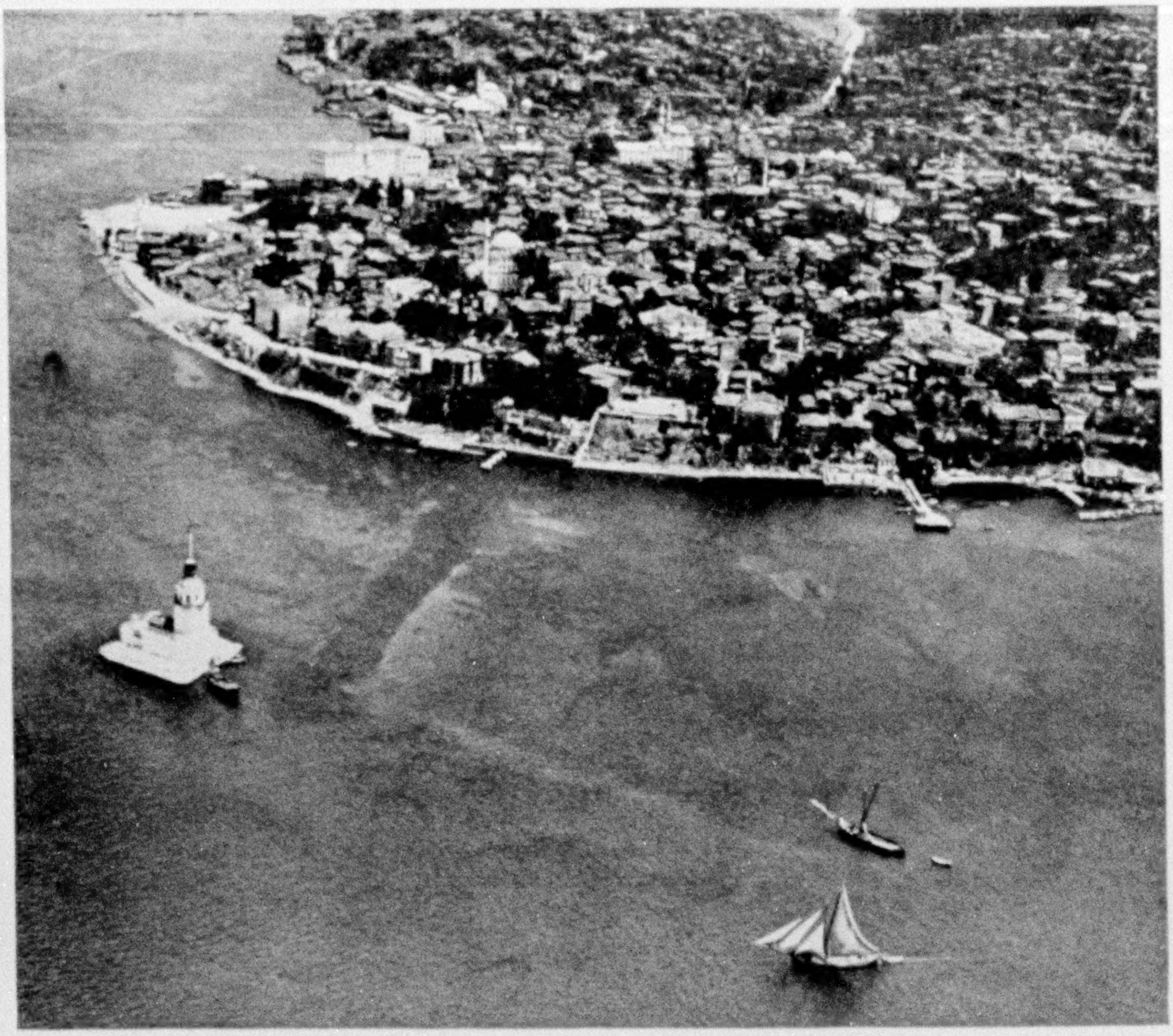
Jason and the *Argo* turned the trick. But, as with Noah's Ark, a dove was the real pathfinder. The bird flew. The islands crashed together, plucking a tail feather. On their rebound the Argonauts dashed between. On the trail of the dove I rode safely above the rock in an airplane, taking the first authorized air views.*

Men entering the Black Sea have always prayed for safety. On escaping into the Bosporus, they give thanks. On the site of the Hieron, sacred to the "twelve gods," the Byzantines built a castle. Later the Genoese captured it and gave it their arms and their name. A path along the ridge, with heavy underbrush to the east and the Bosporus a blue ribbon below, brought us to Giant's Mountain, a matchless outlook point over which the impulsive Childe Harold, concocter of brilliantly barbarous rhymes, suffered literary seasickness.

On this Moslem picnic ground one can turn back the years and study Turkish life unspoiled, as if motors and jazz bands were still unknown.

---

* See "Seeing 3,000 Years of History in Four Hours," by Maynard Owen Williams, in the NATIONAL GEOGRAPHIC MAGAZINE for December, 1928.



SKUTARI IS ASIA'S FARTHEST WEST ALONG THE BOSPORUS

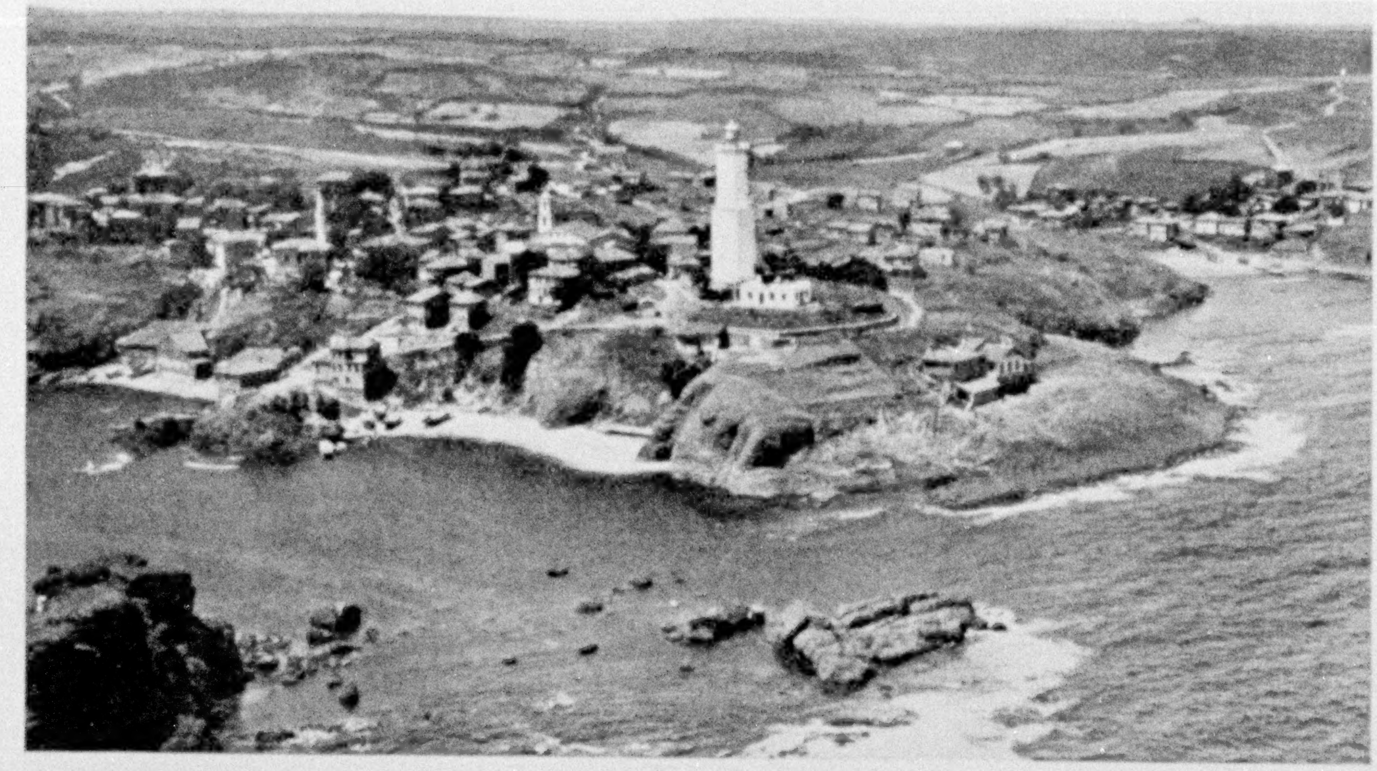
The strait is to the left and the beginning of the Sea of Marmora to the right. A short sea passage, sometimes known as the Arm of St. George, connects the two. In the middle of the Bosporus is an islet with a white, spired edifice known as Leander's Tower, or by the Ottomans as the Maiden's Tower. There is a legend that a sultan's daughter was once kept here. Skutari has recently been rechristened Üsküdar in the New Turkish.

Here the family is the social group, and Turkish love for children, for spreading trees, for fields and flowers and breezes, finds expression. There is no commercial spirit, except that an enterprising vender has lugged up from Beykoz a tray of sweet pudding, which is eaten from heart-shaped spoons.

The whole gathering has a spontaneous air. Babies, cradled in improvised hammocks, swing back and forth from sun to shade. Old ladies in white head scarfs, who have courageously climbed this hill, now sit in peace and quiet on their spotless matting. Youngsters with rubber balls play, laugh, shove and squeal, and on a score of swing-ropes, brought for the occasion, girls, boys, and grown-ups sweep far out over the steep slope, so that they seem creatures of the air. The sexes mingle in frankest comradeship and perfect propriety.

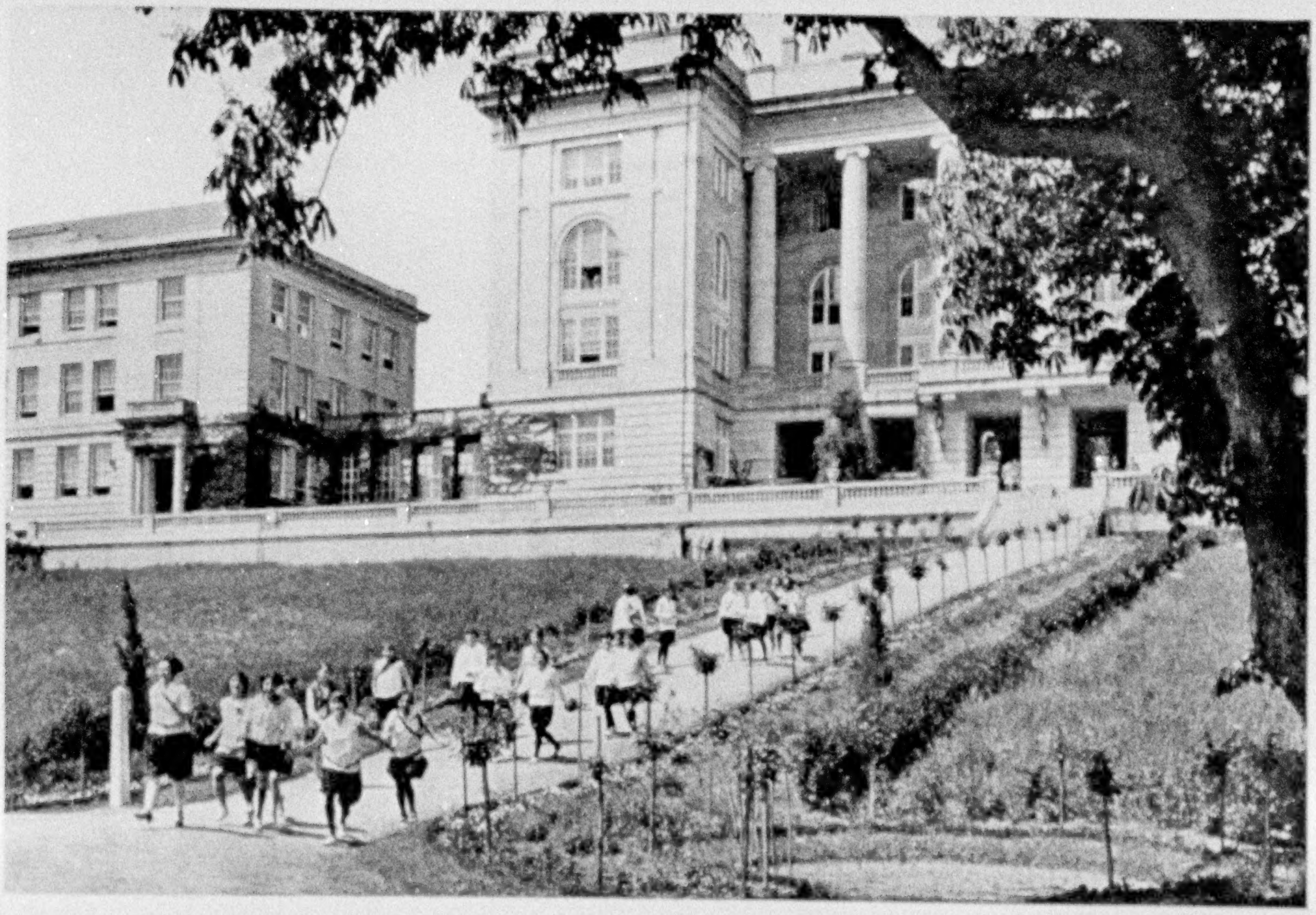
While the men were at their noon prayers, women were nursing feeble fires under pots and kettles. There are even shiny samovars. Seated on the ground in compact knots, parents and children feast quietly and abstemiously. Long cucumbers brought forth from old silk scarfs, squares of meat spitted on new-cut wands, firm, round loaves of bread, and water from the hilltop well, compose the simple meal, on which no elaborate preparation is expended.

Unaffectedness and tolerance mark the gathering. Children establish intergroup



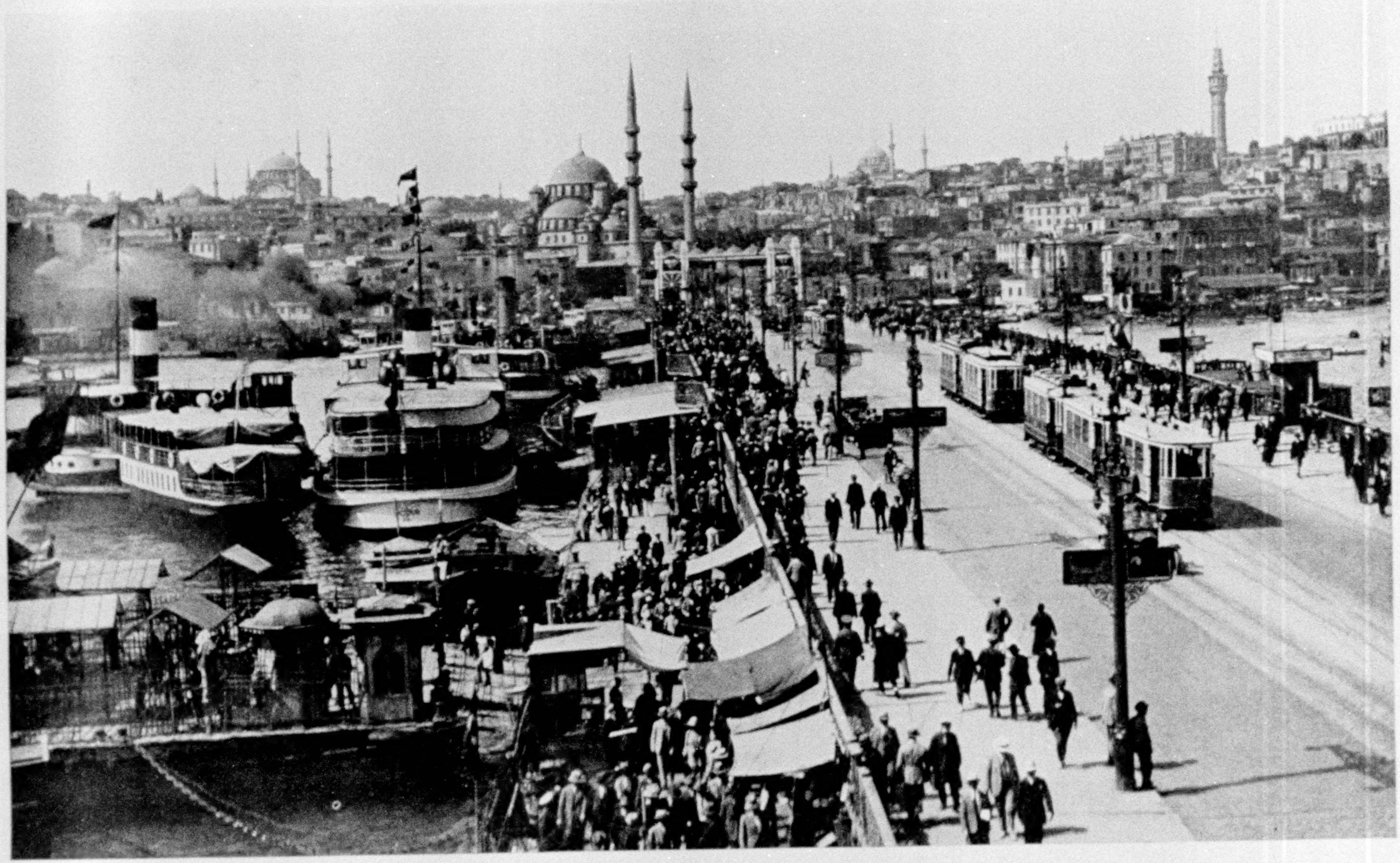
HERE JASON AND HIS ARGONAUTS HAD A CLOSE SHAVE

In the lower left corner is the one surviving Cyanean rock. Past this shifting group Jason and his *Argo* successfully ran the gantlet and it became stable (see text, page 501). On top is the white so-called "Column of Pompey." In the distance, behind the Fanaraki lighthouse, is the softly rolling landscape of the east-thrust tongue of Europe.



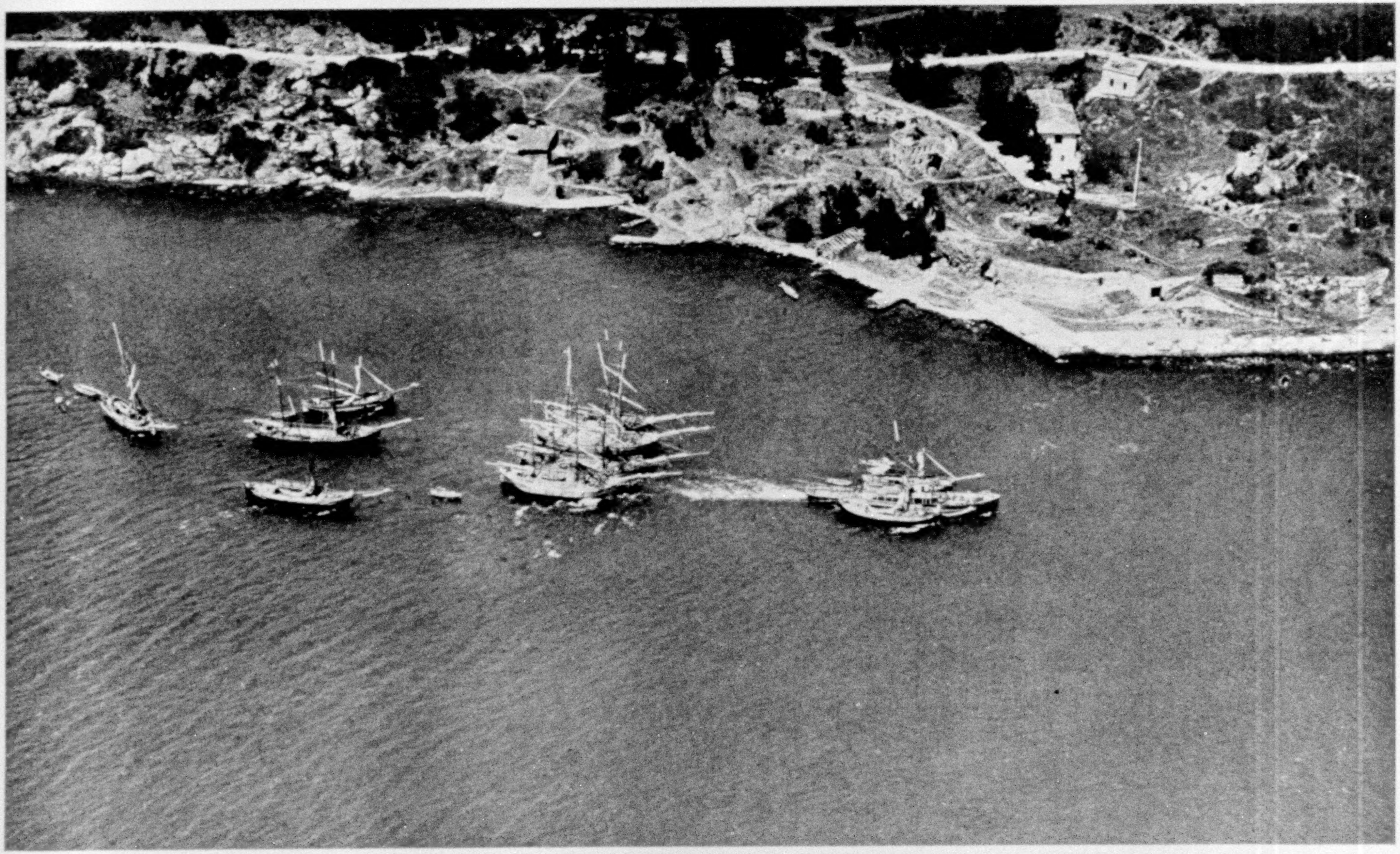
A MONUMENT OF AMERICAN PHILANTHROPY IN THE NEAR EAST

Founded in 1871 as a high school for girls, changed to a full-fledged college in 1890, the Constantinople Woman's College at Arnaut Köi is the only one of its kind for women east of Vienna (see, also, Color Plate II). Mitchell Hall, dining room and dormitory, at left; Gould Hall to the right (see text, page 489).



GALATA BRIDGE IS THE GRAND CENTRAL OF CONSTANTINOPLE

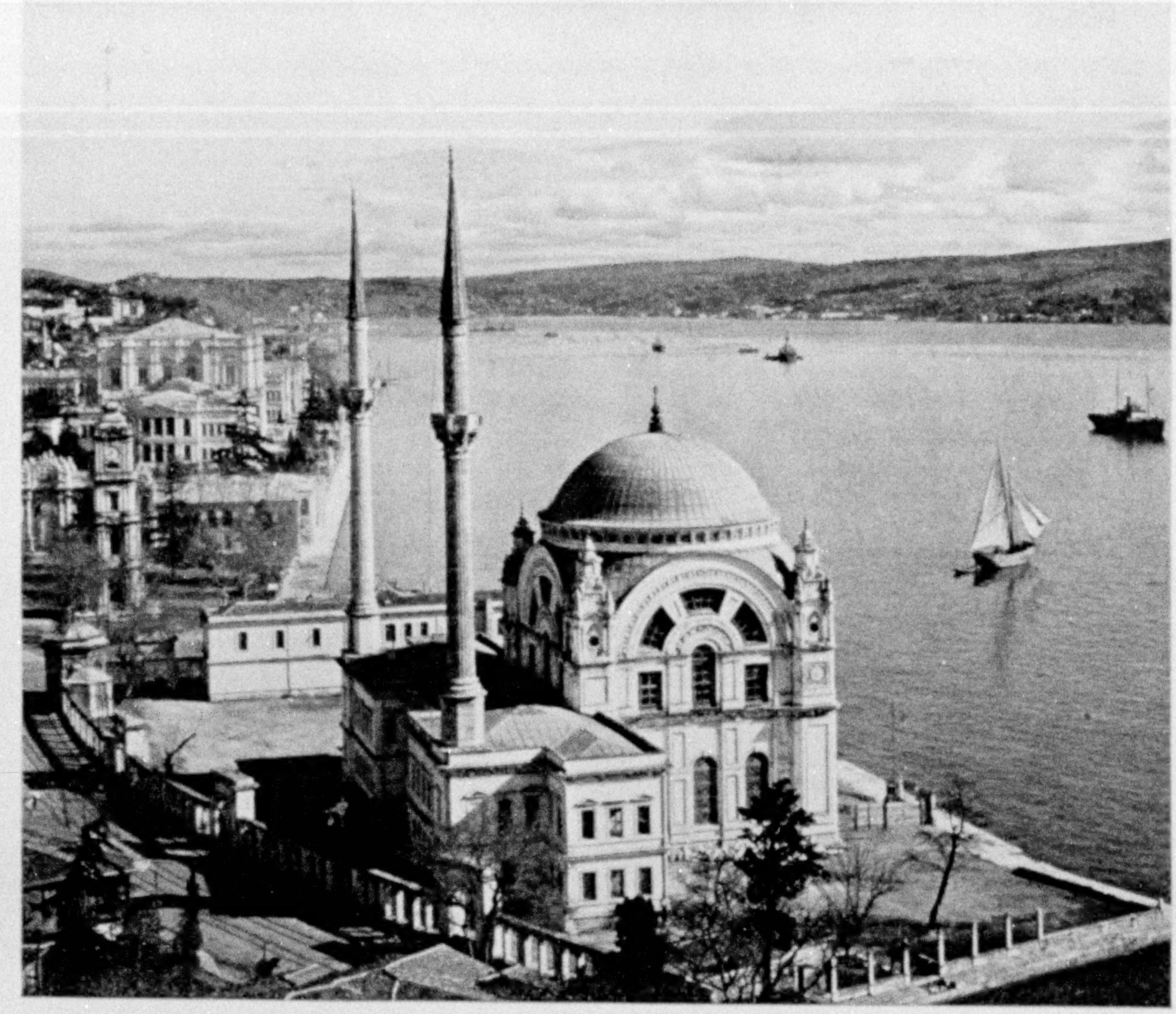
Here, for trippers and commuters alike, the Bosporus begins, with comfortable steamers departing seventy times a day. At the left, as one looks toward Stamboul, is the Nouri Osmanieh Mosque. At the Stamboul end of the bridge is the Yeni Valideh Djami (New Mosque of the Sultan's Mother), begun in 1615; to the right of it the Bayezid Mosque, and then the Stamboul Fire Tower.



ALONG THE BOSPORUS, FORT SUCCEEDS FORT

The Ottomans built the earlier ones in that proud day when, for war and battle, they looked only to themselves. French engineers planned and supervised the construction of the later ones, to which group belongs Telli Tabia, a semihexagonal stone fortress south of Rumeli Kavak, across the Bosporus from Anatoli Kavak.

XUM



THE "PALACE ZONE" OF THE BOSPORUS AFFORDS CHARMING UPSTREAM PROSPECTS

In the foreground is the Dolma Bagcheh Mosque. At the left and beyond is the Dolma Bagcheh Palace inclosure, with interminable dainty wings, lacelike carvings, and a façade on the strait more than 700 yards long Beyond it topless Cheragan Palace (see text, page 487) hides the Orta Köi Mosque in the distance. The terraced houses of Beshiktash cover the hill to the left. On the Asiatic shore, at the right, is Beylerbey Palace (see text, page 489).

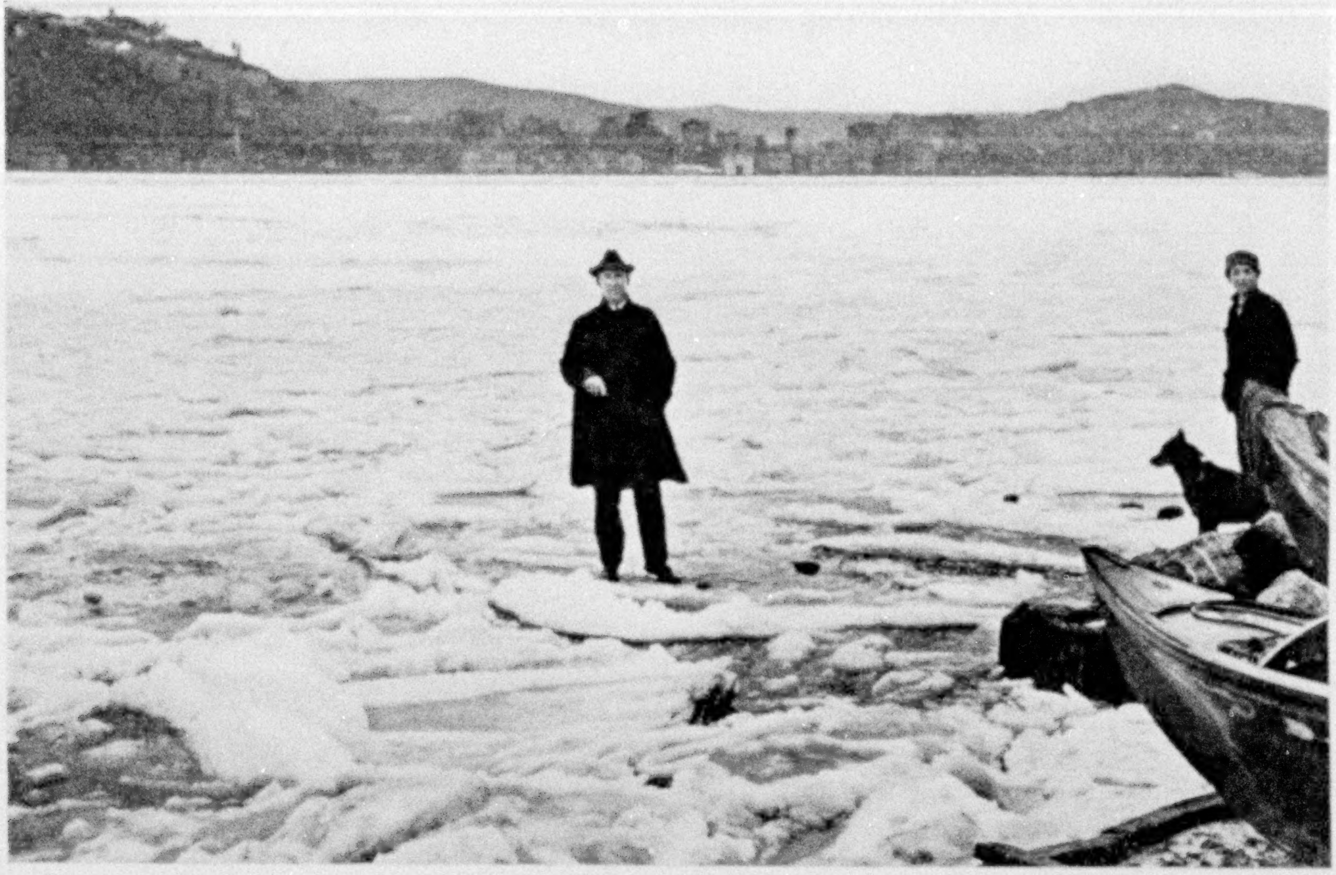
relationships as children are wont to do, but the older folks are content in small parties. Nothing is organized, nothing catered to, but this is the happiest, most natural gathering on all the Bosporus.

As we descend toward Beykoz, my wife discourses on Turkish virtues and a bald, bearded schoolmaster, sweating up the slope, has all the benignity of a Santa Claus.

Before us stretches a splendid avenue of plane trees in the midst of the secluded valley where 15,000 Russians, sent by the Tsar to prevent Mehemet Ali, of Egypt, from successfully challenging Turkish autocracy, camped on a site used long before by the Crusaders of Louis VII. Here, too, 60,000 picked soldiers of Turkey paraded before the Empress Eugénie, wife of Napoleon III and the wit and beauty of her day.

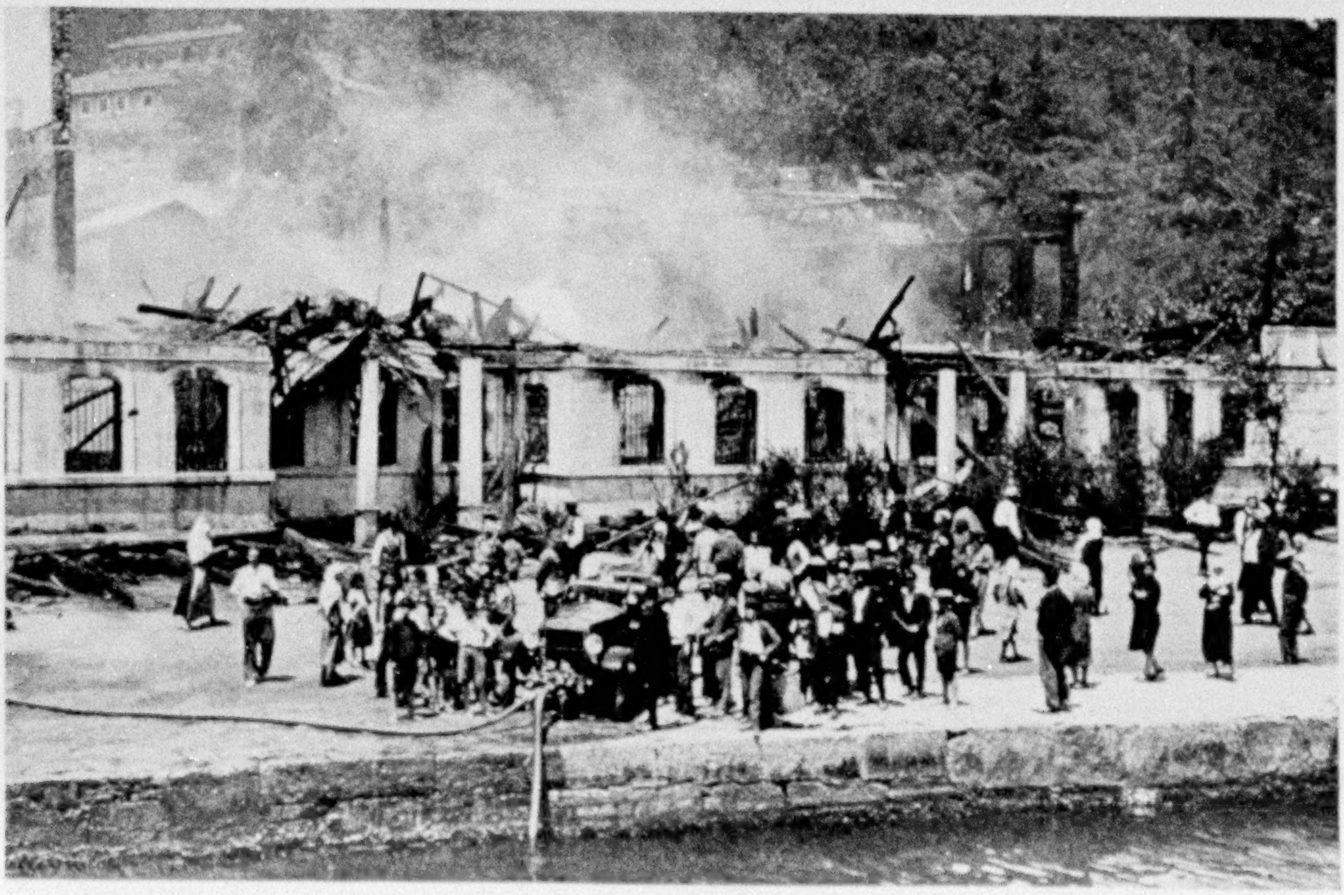
Boys on hired bicycles race around the parade ground, paced by an asthmatic motorcycle, hired out at five cents a circuit. On two football fields, a dozen balls are being kicked about. In the Bosporus, at the end of the valley, a fisherman, perched on a pole, like a stork on a nest, watches for the moment to close a fish trap.

Shoulders are burned and children told to "take their hands out of the water." There are debates as to who will row and how granny will sit so the sun won't be in the baby's face. Fat-limbed mamas, with a beam in their own eyes, admonish their 12-year-old daughters to "pull down



"JUST TO PROVE THAT I ONCE WALKED ON THE BOSPORUS"

The European staff correspondent of the NATIONAL GEOGRAPHIC MAGAZINE stands on ice that has formed over deep water below the landing stage at Rumeli Hissar. During the winter of 1928-9, the most severe in 67 years, floe ice from the Black Sea almost bridged the strait and disrupted business by confining boats to their piers. The Bosporus is rarely frozen over.



A JOKE THAT HAS LOST ITS POINT

The amusing idea of Constantinople's fire department running to a blaze with a hand pump and torchbearers must now be revised, for there are motorized units similar to this one which is restricting the fire area in a conflagration which destroyed one of the twin palaces just above the Orta Köi landing (see, also, illustration, page 490).

XUM

your skirts." At Beykoz, where a solemn company sat, daring a phonograph to be funny, forks began to beat a tattoo when "Dixie" leaped out from an American medley.

Give a Turk a chance to hear what he considers good music and he will travel far and listen long. This year, a casino at Chibukli (now Çubuklu) draws the crowds. The central decoration on each table is a dewy bottle of the local spring water. Old ladies in the black of yore have lifted their veils, revealing gold-rimmed spectacles and shrewd faces. Whitewashed latticed balconies, dotted with colorful dresses and a few furs, rise against the hill.

A musician spends half an hour tuning—or de-tuning—a piano, and the concert begins. Can any Westerner describe this quavering, nostalgic music passed back and forth from piano to zitherlike *kanoon;* divided between violin and its lap-held embryo, the *kemençe;* punctuated by the shrill pipings of the *ney* and the rattle of the *tef?*

THE SWEET WATERS OF ASIA HAVE LOST THE GLAMOUR OF THE PAST

Gen. Lew Wallace, Pierre Loti, Claude Farrère, and many another have described the charm and pageantry of the Sweet Waters of Asia. But for some reason this former playground of princes, this rendezvous of rich and poor, of daring gallant and twice-veiled lady, is no longer the vogue. Fishermen hang their dark-brown nets beside the still waters and market gardeners pile high rude barges of cabbages or beans before rowing them to Stamboul. The valley has lost none of its quiet beauty, but the glamour of the past is gone.

When the north winds sweep down from the Black Sea, adding their force to that of the Devil's Current, my boatman, ferrying me back from Asia, rows high up the backwaters of Asia until I can gaze up at the domed ceiling of a room which has been described as "the most precious thing of its kind . . . in all the world." It is the house of the Kuprili family, five of them grand viziers.

To relate how they ruled the empire of a hunt-loving sultan and captured Candia after the longest of sieges, or to discuss how European history might have been changed if their unique dynasty had not been interrupted by the viziership of Kara (Black) Mustafa, would fill a volume.

In the garden of this humble dwelling, poised above the Bosporus, a group of men sat talking near where their spotless motor boat was moored. A young man in plus-fours and checkerboard stockings, on being asked if we might enter, said "Sure!" Now a student in an American school near Paris, his English was learned in New York.

In that priceless room, for which restoration would mean ruin, a phonograph occupied one small table and a racing shell was stretched along the northern wall. The gold leaf on the ceiling hung in shreds. The graceful marble fountain was still, an eloquently muted tombstone of a vanished day.

Slanting across the Bosporus at its narrowest, we watched the massive towers of Rumeli Hissar swing against the evening sky, and I thought of the words of Dr. Edwin A. Grosvenor concerning the strait: "Whoever undertakes its delineation must be painfully self-conscious at the start that his omissions will be manifold more than all he says."

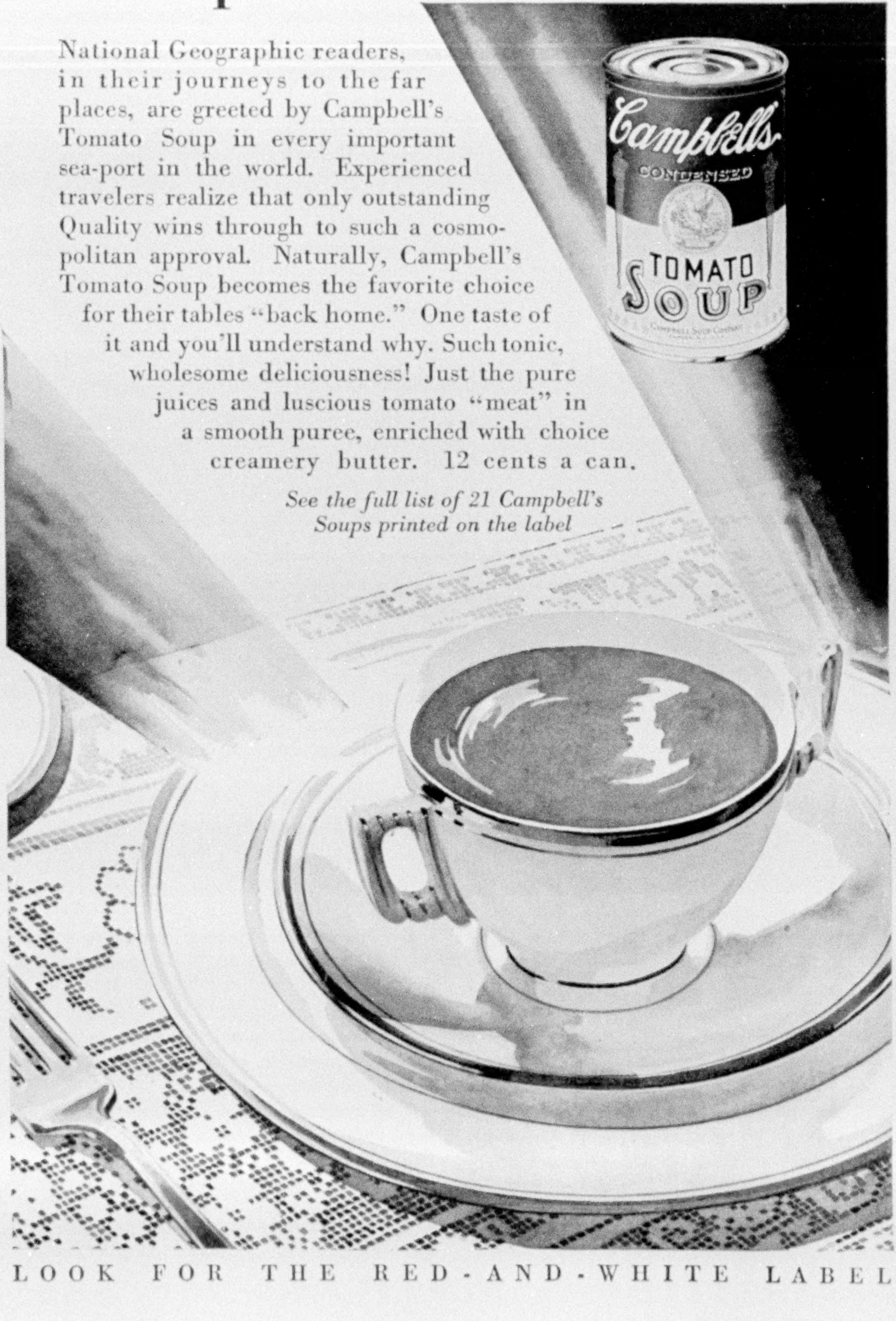
But in these days of Munchausen travel tales, verbal skill is suspect and history has crowded this canvas with exploits which no modern may match. Rather let the unimaginative but accurate lens serve until your dream ship, plowing Eurasian waters, reveals this glorious panorama while you share with holiday-making Easterners a Bosporus week-end!

* * *

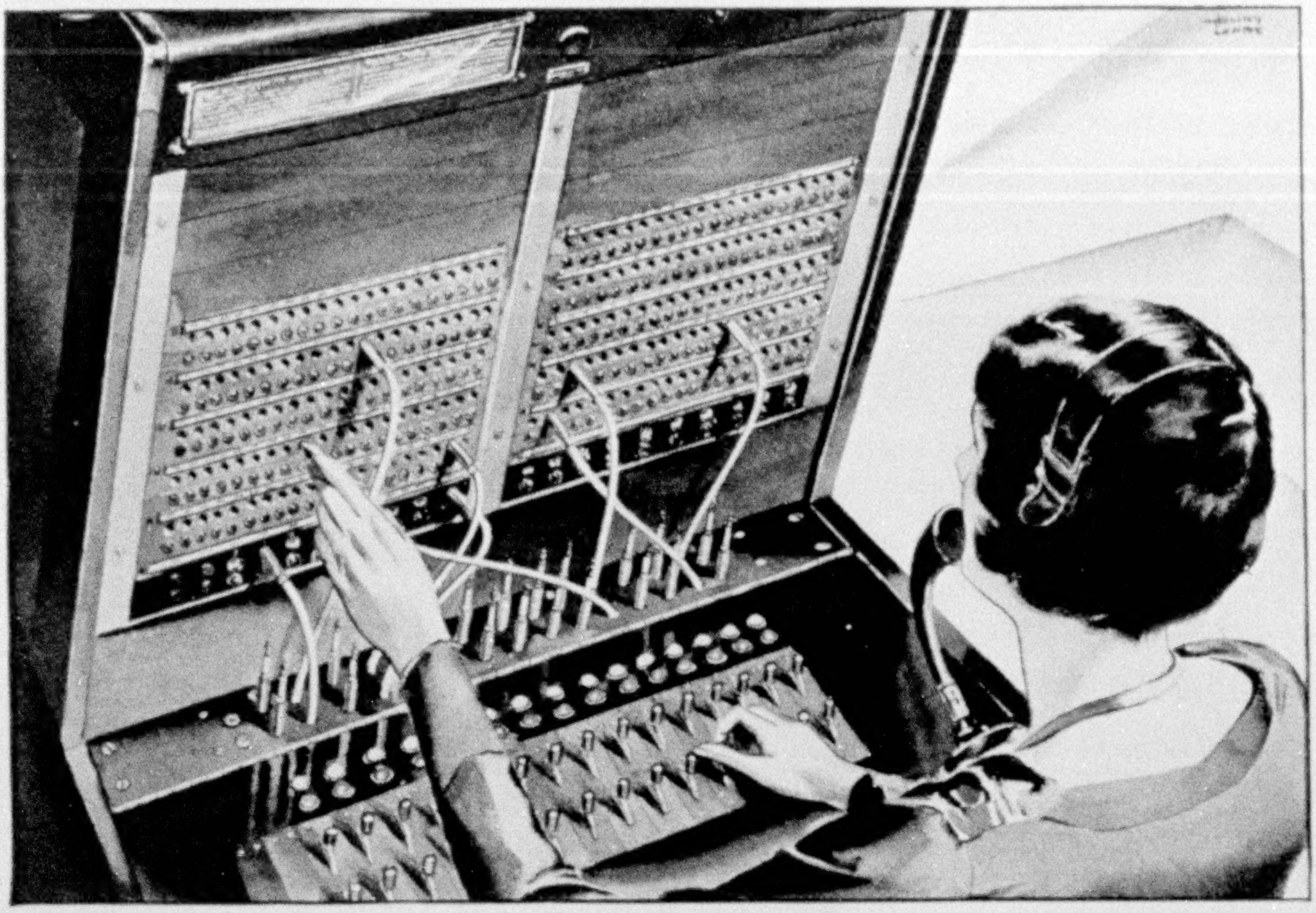
The soup known round the world!

National Geographic readers, in their journeys to the far places, are greeted by Campbell's Tomato Soup in every important sea-port in the world. Experienced travelers realize that only outstanding Quality wins through to such a cosmopolitan approval. Naturally, Campbell's Tomato Soup becomes the favorite choice for their tables "back home." One taste of it and you'll understand why. Such tonic, wholesome deliciousness! Just the pure juices and luscious tomato "meat" in a smooth puree, enriched with choice creamery butter. 12 cents a can.

See the full list of 21 Campbell's Soups printed on the label



LOOK FOR THE RED-AND-WHITE LABEL



THE FAR-FLUNG PARTS OF AN ORGANIZATION, ITS DEALERS AND ITS CUSTOMERS, ARE BROUGHT AS CLOSE AS INSTANT SPEECH

Great strides in invention, great expenditures . . .

An Advertisement of the
American Telephone and Telegraph Company

BUSINESS, using the telephone, eliminates space and time. The far-flung parts of an organization with its dealers and customers are brought together by instant speech. The home, like the office, reaches out over an ever-widening circle of neighbors.

The telephone is tireless and quick. It runs errands near and far, transacts business, keeps friendships alive. Telephones throughout the house save time and fatigue. They bring the comforts and conveniences of the office to the women in the home.

Keeping ahead of the new developments in American life calls for great strides in inventions, great expenditures in money. The Bell System's outlay this year for new plant and service improvements is more than 550 million dollars. This is one and one-half times the cost of the Panama Canal.

This program is part of the telephone ideal that anyone, anywhere, shall be able to talk quickly and at reasonable cost with anyone, anywhere else. There is no standing still in the Bell System.

Why complicate your investment problem?

Rarely nowadays will you find a busy executive poring over the securities lists from half a dozen sources. Instead he picks out an investment house, the reliability of which is unquestioned, and looks to it for a solution of his investment problems.

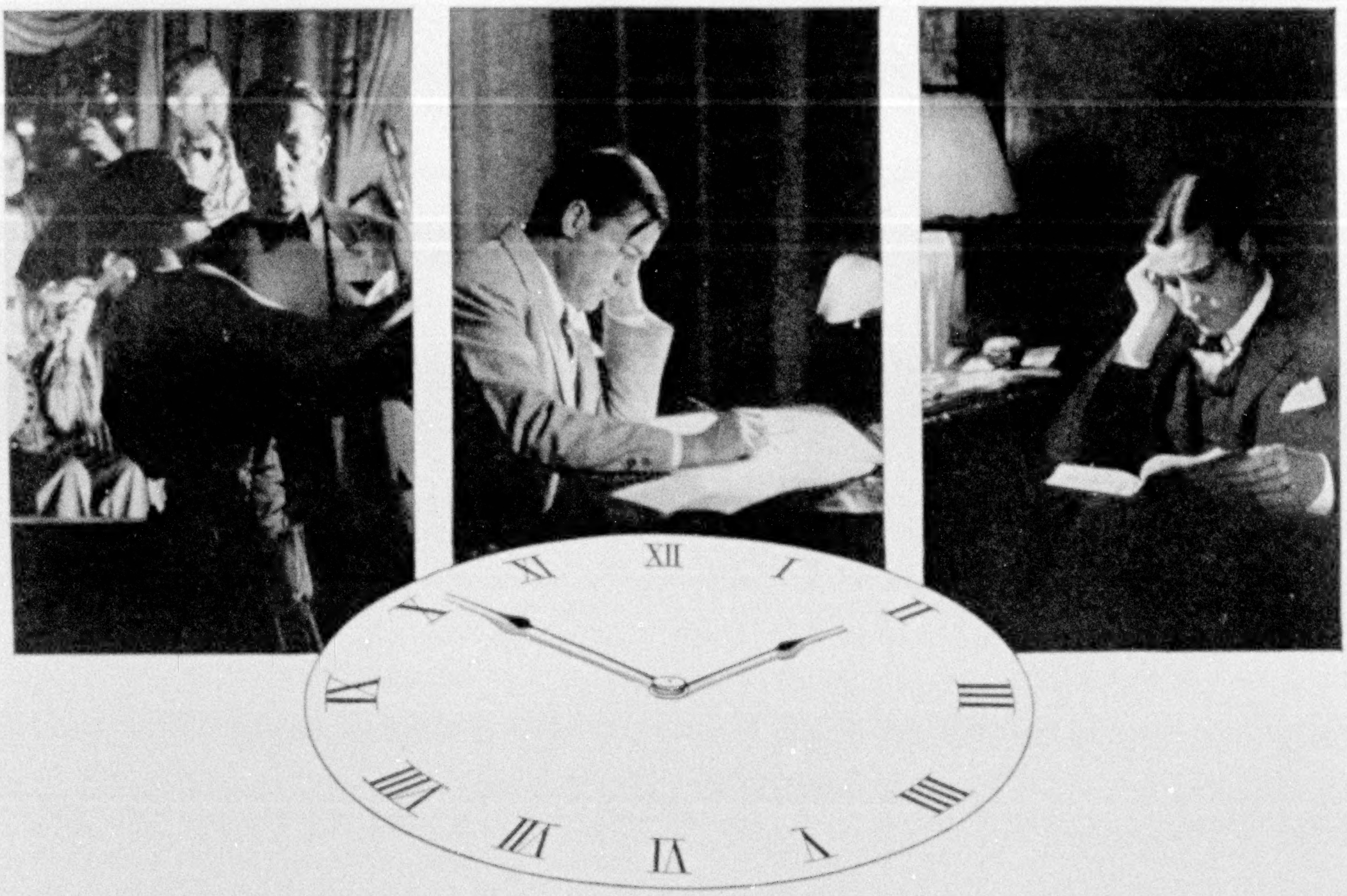
To get in touch with this kind of time-and-worry-saving service call the nearest of The National City Company's offices in 50 American cities. You will find one of our investment advisors with National City world-wide investment knowledge at his command, ready to help you check over your holdings or suggest new purchases from broad lists of carefully selected securities.

The National City Company

National City Bank Building, New York

INVESTMENT SECURITIES

OFFICES IN 50 AMERICAN CITIES. INTERCONNECTED BY 11,000 MILES OF PRIVATE WIRES. INTERNATIONAL BRANCHES AND CONNECTIONS.



Rob yourself of sleep . . . *but you can't rob the* Gillette Blade *of its sure, smooth shave*

A FACE drawn and tight from lack of sleep, a slapdash lather and a hurry-up shave—it can't ruin the even temper of a Gillette Blade, even though it may wreck your own.

On such mornings lather extra thoroughly and treat yourself to a fresh Gillette Blade. You're sure then of the smooth, even, comfortable shave which has been honed and stropped into *every* Gillette Blade by machines adjusted to one ten-thousandth of an inch.

Every Gillette Blade *must* be even and sure. To guarantee that, four out of every nine of our blade department employees are inspectors and are paid a bonus for detecting every blade that won't do a superb job of shaving.

No two men have identically the same kind of beard. No man gives his Gillette the same kind of job to do every morning. A dozen varying conditions affect the comfort of your shave. The Gillette Blade alone remains constant.

Eight out of ten American men count on the Gillette Blade to do its job *well* every morning. It does. Witness the smooth faces of American men today. Gillette Safety Razor Co., Boston, U.S.A.

King C Gillette

THE only individual in history, ancient or modern, whose picture and signature are found in every city and town, in every country in the world, is King C. Gillette. This picture and signature are universal sign-language for a perfect shave.

★ **Gillette** ★

HERE'S SOMETHING NEW

A CHRYSLER DEVELOPMENT
THAT REVOLUTIONIZES PERFORMANCE

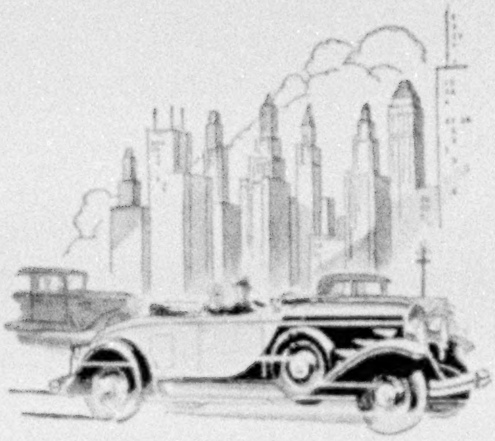
TRY IT

SOMETHING startling has happened. Three sensational new Chryslers are abroad in the land.

In the thick of city traffic—on the streets and boulevards—along the highways and byways — in the mountains — on the plains—their unprecedented performance is changing every notion of what a motor car can be expected to do.

The new Chrysler "77" and "70" introduce such epochal new developments as:

MULTI-RANGE GEAR SHIFT
DOWN-DRAFT CARBURETION
SYNCHRONIZED POWER
PARAFLEX SPRINGS
ARCHITONIC BODIES



Come to the salesroom. Examine these new Chryslers at your leisure. Then take one out; drive it; and you'll experience the supreme sensation.

$1595 NEW CHRYSLER "77" PRICES — 9 Body Styles, priced from $1595 to $1795. F. O. B. Factory (Special Equipment Extra).

$1245 NEW CHRYSLER "70" PRICES — 6 Body Styles, priced from $1245 to $1395. F. O. B. Factory (Special Equipment Extra).

$985 NEW CHRYSLER "66" PRICES — 6 Body Styles, priced from $985 to $1065. F. O. B. Factory (Special Equipment Extra).

CHRYSLER

CHRYSLER MOTORS PRODUCTS

WITH MULTI-RANGE GEAR SHIFT — NEW "77"

WITH MULTI-RANGE GEAR SHIFT — NEW "70"

A CHRYSLER SIX UNDER $1000 — NEW "66"

© 1929
Chrysler Corporation

Give your
Car a treat
ask for
me
Ethyl

© E. G. C. 1929

WHAT HIGH COMPRESSION MEANS

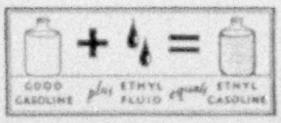
BACK in 1926, when Ethyl Gasoline was first generally distributed, only about one-tenth of the new automobiles were of so-called high compression (a 5 to 1 ratio or higher). This year more than three-quarters of the new car models now being offered to the public are of this type.

Ethyl is responsible for this great advance in engine efficiency, for high-compression engines require a fuel of Ethyl's anti-knock quality.

Ordinary gasoline "knocks" and loses power when compressed beyond a certain point. The Ethyl fluid in Ethyl Gasoline eliminates "knock" under higher pressures and develops more power. Leading oil companies in the United States, Canada and Great Britain mix Ethyl fluid with their gasoline to form Ethyl Gasoline. On sale everywhere.

Start riding with Ethyl today. It improves the performance of any car, new or old, whatever its compression.

ETHYL GASOLINE CORPORATION · 25 Broadway, New York
56 Church Street, Toronto, Can. 36 Queen Anne's Gate, London, Eng.



Knocks out that "knock"

ETHYL
GASOLINE

"Cram sleep while you can,"

says COMMANDER BYRD

An Interview by
FITZHUGH GREEN

Commander Richard E. Byrd, hero of North Pole and Trans-Atlantic flights, said instantly when asked what he relied on most to help him stand the terrible strain of a long flight:

"Proper sleep and exercise in the weeks preceding that flight."

When Byrd hopped off for Paris at dawn on June 29th, 1927, he had had only two hours sleep the night before. He was in the air 42 hours before he landed: hours filled with the frightful bedlam of three roaring motors. He landed in France several hours after midnight and worked six hours longer without resting.

Such a test of nervous and physical endurance is almost beyond comprehension. That Byrd should survive it with no especial need for rest afterward proves supremely the truth of his simple energy formula: sleep.

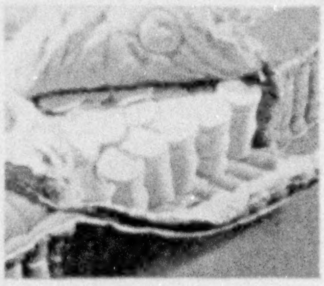
How does he endure such tests? By being rested when he starts, by being able to go to sleep at any time.

"For it is during sleep," Byrd reminded me, "that the body renews the vitality which its owner has so extravagantly used during the day."

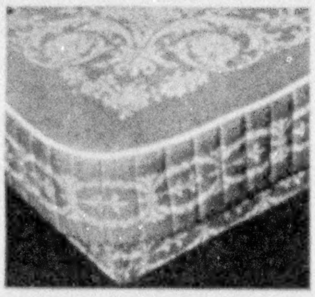
•

What Commander Byrd says on storing up energy through proper sleep is a message of interest to all. Simmons, largest makers of beds, springs and mattresses, have perfected the sleep equipment which gives complete relaxation and induces restful sleep. Simmons Beautyrest Mattress $39.50; Simmons Ace Box Spring, $42.50; Simmons Ace Open Coil Spring, $19.75. The Simmons Company, New York, Chicago, Atlanta, San Francisco.

COMMANDER RICHARD E. BYRD is now leading an expedition through the unexplored ice-bound wilderness of the Antarctic—in the vicinity of the South Pole.



Simmons Beautyrest Mattress —Hundreds of close packed sensitive coils, each cloth-encased. Over this, thick upholstery assuring utmost comfort.



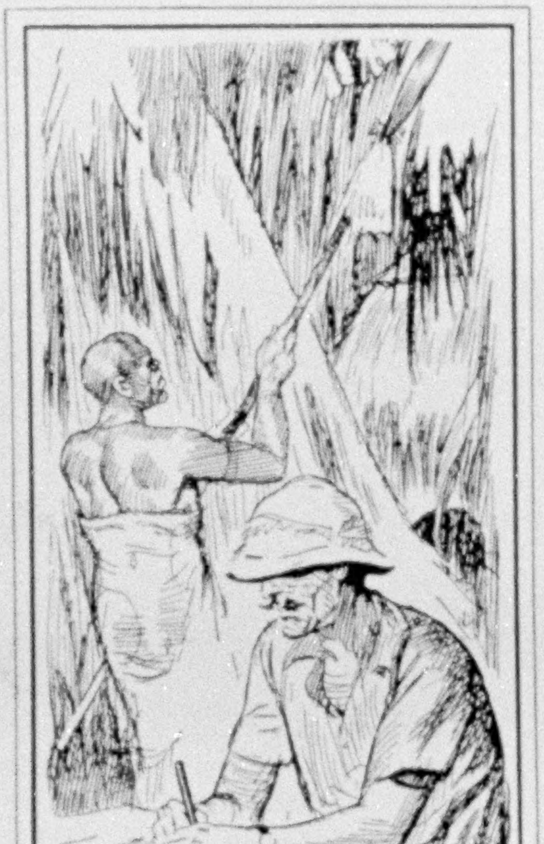
Simmons Ace Box Spring—Steel braced, seasoned lumber frame. Resilient, finely tempered coils. Upholstered and damask-covered to match Beautyrest.

© 1929, the Simmons Company

SIMMONS

WORLD'S LARGEST MAKERS OF BEDS · SPRINGS · MATTRESSES

The **SWAN** Pen
Pen of the British Empire
SINCE 1843



IN the African jungle, in the Australian bush, the effortless glide of a *Swan* ETERNAL PEN has written letters home from many a lonely adventurer.

On the page of an explorer's diary, an officer's notebook, its velvet touch has helped write the history of an Empire. At the Equator and close to the Pole, the *Swan* ETERNAL PEN has proved its enduring perfection.

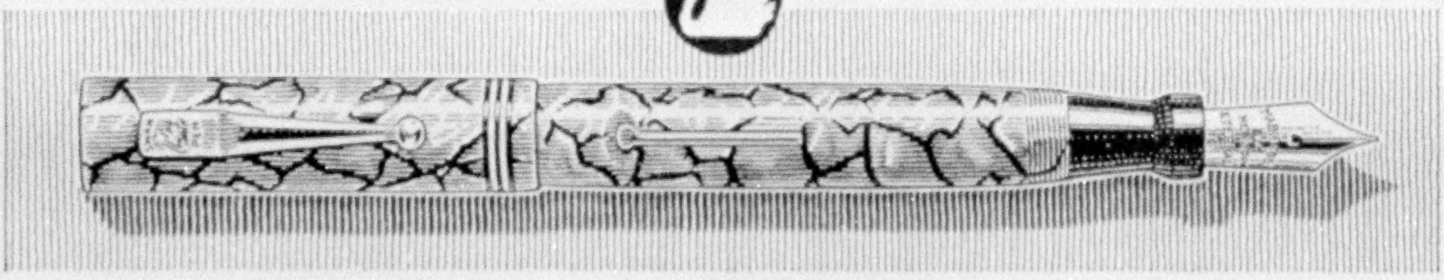
Only craftsmanship as fine as that which fashions jewels can achieve such exquisite precision of adjustment, such unfailing continuity of performance. Only a pen made by hand, with the most meticulous care, can be guaranteed, not merely for a lifetime, but eternally.

FROM FIVE TO TEN DOLLARS.

NEW YORK
243 West 17th Street
CHICAGO
209 South State Street

Swan PENS
MABIE, TODD & COMPANY

LONDON ~ PARIS
BRUSSELS ~ BARCELONA
SYDNEY ~ CAPETOWN



Take ten feet of Ciné-Kodak Safety Film of your children each month. Record the wonderful period between infancy and adolescence.

Those Baby Ways *you love so much*

Make them a permanent possession . . see them in years to come . . whenever you like . . on a Ciné-Kodak Safety Film

Do you realize that some day you will lose your baby's smile? That the time will come when you would give anything to see its radiance again?

Those baby ways you love so much are here today and gone tomorrow. Once the little one grows up, "all the King's horses and all the King's men" won't be able to bring them back.

Your memory, as you find to your sorrow, loses far more than it keeps. Until a few years ago there was absolutely no way to make a permanent *living* record of your children's adorable babyhood.

Just the very idea of sitting in your living room years from now and seeing what your youngsters did *today* makes your heart beat faster. Let Ciné-Kodak home movies bring about this miracle for *you* as it has for thousands of other parents.

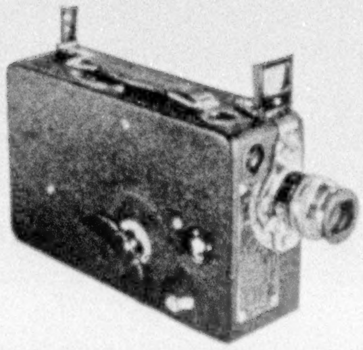
What excuse is there to offer? Expense? A home movie outfit, consisting of Ciné-Kodak, Kodascope and screen, can be bought for as little as $145.

Complicated? Yes—as complicated as opening your own front door, as winding your watch, as tying your shoes! Ciné-Kodak home movies are as easy to make as ordinary snapshots. Unbiased by the precedents and prejudices of professional cinema camera design, the men who made still photography so easy now have made home movie-making equally simple for you.

And now, another Eastman development—Kodacolor—enables you to make home movies in full natural color with the Ciné-Kodak B or BB *f*.1.9. You simply use a Kodacolor Filter and Kodacolor Film when making or projecting Kodacolor.

Also, to supplement your own films, Kodak Cinegraphs, 100-, 200- and 400-foot reels of comedy, travel and cartoons, are available at your Ciné-Kodak dealer's. They cost only $7.50 per 100 feet.

Don't let precious opportunities to take movies of your youngsters slip by through any fault of yours. Ask your Ciné-Kodak dealer to show you outfits and in the meantime mail the coupon for the free booklet—"The Lure of Home Movies."



Ciné-Kodak

Simplest of Home Movie Cameras

EASTMAN KODAK COMPANY

Dept. 252, Rochester, N. Y.

Please send me, FREE and without obligation, your new booklet, "The Lure of Home Movies."

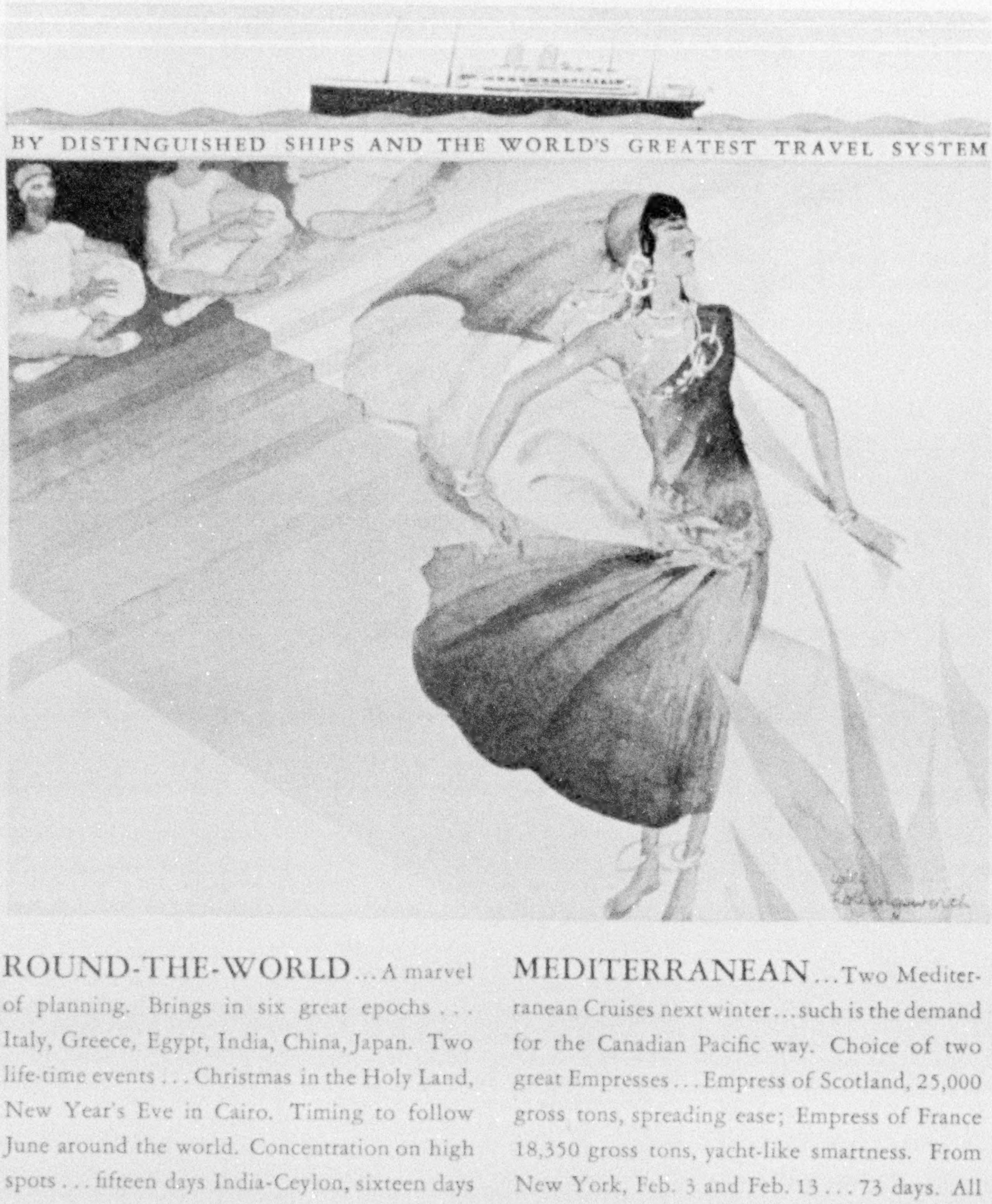
Name____________________________

Address__________________________

__________________________________29

XUM

Cruises *. . . idyllic style*



BY DISTINGUISHED SHIPS AND THE WORLD'S GREATEST TRAVEL SYSTEM

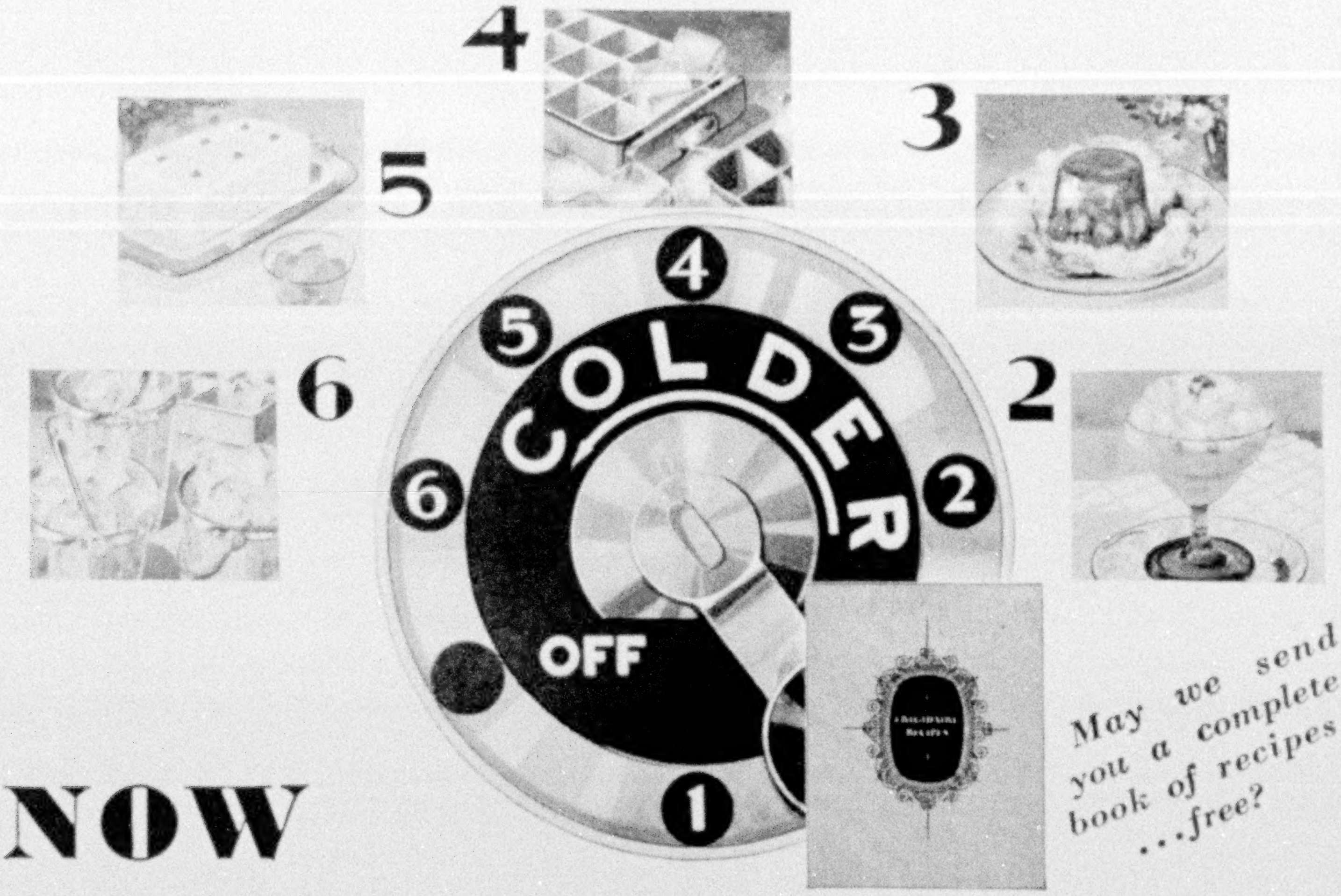
ROUND-THE-WORLD . . . A marvel of planning. Brings in six great epochs . . . Italy, Greece, Egypt, India, China, Japan. Two life-time events . . . Christmas in the Holy Land, New Year's Eve in Cairo. Timing to follow June around the world. Concentration on high spots . . . fifteen days India-Ceylon, sixteen days China, ten days Japan. Alluring odd corners . . . Java, Siam, Formosa.

Your ship is the far-famed Empress of Australia, the ship of luxurious roominess, 21,850 gross tons. Who but Canadian Pacific could plan such a cruise? Who but Canadian Pacific could carry it out? From New York, Dec. 2, 137 days. As low as $2000.

MEDITERRANEAN . . . Two Mediterranean Cruises next winter . . . such is the demand for the Canadian Pacific way. Choice of two great Empresses . . . Empress of Scotland, 25,000 gross tons, spreading ease; Empress of France 18,350 gross tons, yacht-like smartness. From New York, Feb. 3 and Feb. 13 . . . 73 days. All the usual Mediterranean ports, and also those you can never do on a run-in-run-out cruise, such as Venice, Majorca, Dubrovnik, Corfu, Sicily, Beirut. As low as $900.

Booklets, itineraries, ship-plans. If you have a good travel-agent, ask him. Also, any Canadian Pacific office: New York, Chicago, Montreal and thirty other cities in United States and Canada.

Canadian Pacific



May we send you a complete book of recipes ... free?

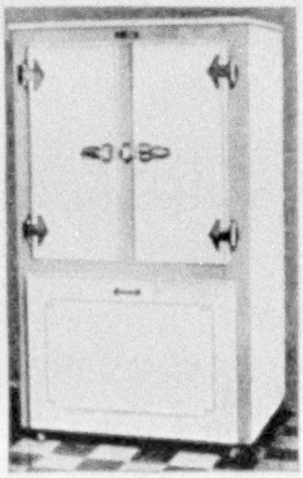
NOW

you can make scores of delicious new salads and desserts ... *with the* Frigidaire "Cold Control"

THE sensational new Frigidaire "Cold Control" brings you an added service ... a service that practically doubles the pleasure of having an automatic refrigerator in your home. It enables you to regulate, at will, the time required to freeze ice. It makes the preparation of unusual salads remarkably easy. It permits you to have delicious frozen desserts that require extreme cold ... whenever you want them.

And the "Cold Control" is only one of *many* added features that Frigidaire now offers. The power unit is extra-powerful yet incredibly quiet. You don't hear it start, stop, or run. And it is placed in the *bottom* of the cabinet ... out of sight and out of the way. There is no exposed mechanism ... nothing to catch dust or dirt.

The new Frigidaire cabinets are both practical and beautiful. They are remarkably easy to clean. The top is flat and usable. Shelves are waist-high from the floor and easy to reach. There is no stooping necessary.



Mail the coupon for your free recipe book ... now

We have just prepared a free book giving facts you'll want to know about electric refrigeration. It also gives complete information about Frigidaire and the many Frigidaire features that save time, work, and trouble. Mail the coupon for this book. We will also send a complimentary copy of the big illustrated Frigidaire recipe book. Mail the coupon today. Frigidaire Corporation, Subsidiary of General Motors Corporation, Dayton, Ohio.

FRIGIDAIRE

More than a **MILLION** *in use*

FRIGIDAIRE CORPORATION,
Dept. Y-319, Dayton, Ohio.

Please send me your book about Frigidaire, also a copy of the Frigidaire recipe book ... both free.

Name..................................

Address..................................

In Canada, address Frigidaire Corporation, 1604 Sterling Tower, Toronto, Ontario.

The Fifth Avenue Building . . . where merchants find a world-wide market

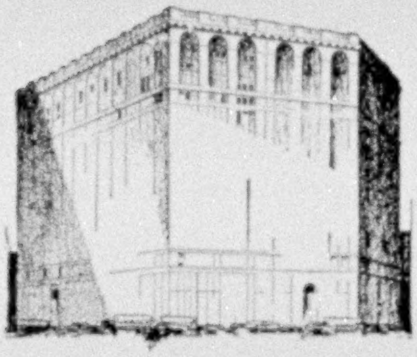
OUT-OF-TOWN buyers from all over the world, come to The Fifth Avenue Building. Here, in one building, they find the New York offices and display rooms of leading manufacturers. Manufacturers of glassware, toys, novelties, paper, men's wear, women's wear, greeting cards, stationery; of well-known commodities and of interesting new products.

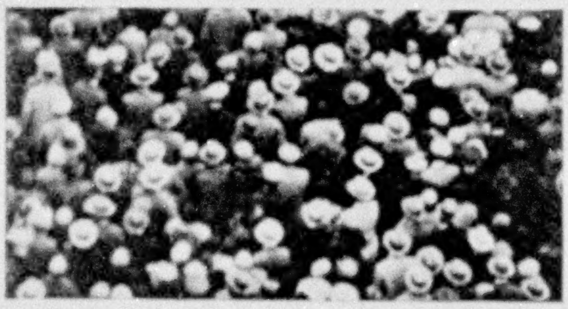
Buyers have learned that they can complete here many of their seasonal requirements on a single buying trip.

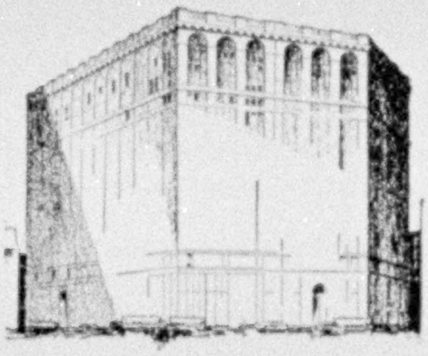
Tenants of The Fifth Avenue Building enjoy the additional advantage of convenient location and ease of access. Manhattan's shopping and financial districts are but a short distance away. An elevated line is within a block, busses and surface cars pass the door. All New York, uptown and downtown, is within easy reach. Trains as well, for The Fifth Avenue Building is but thirteen minutes from Grand Central Station, and ten minutes from the Pennsylvania Station.

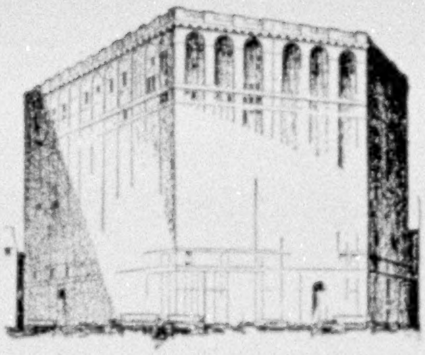
Here, where Broadway crosses Fifth Avenue, the famous Fifth Avenue Hotel once stood—200 Fifth Avenue. It is an address that will always be remembered throughout the world of fashion. Now, successful business adds prestige to its lasting social prominence.

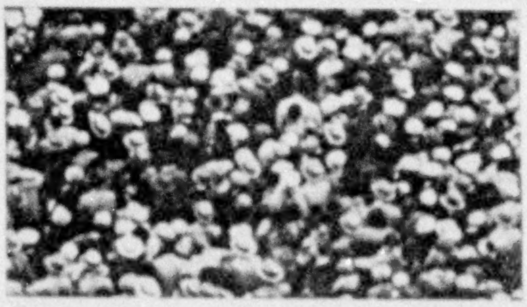
It is not surprising that merchants in The Fifth Avenue Building meet buyers from near and far . . . who know the address, how to reach it, and how well they can transact business there. When you are in New York, we should be glad to show you through the building.









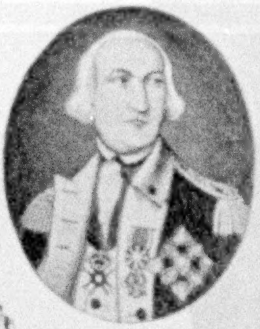


THE FIFTH AVENUE BUILDING

"More than an office building"

●Broadway and Fifth Avenue,
at Madison Square, New York

The Steuben Club



Baron Friederich Wilhelm von Steuben

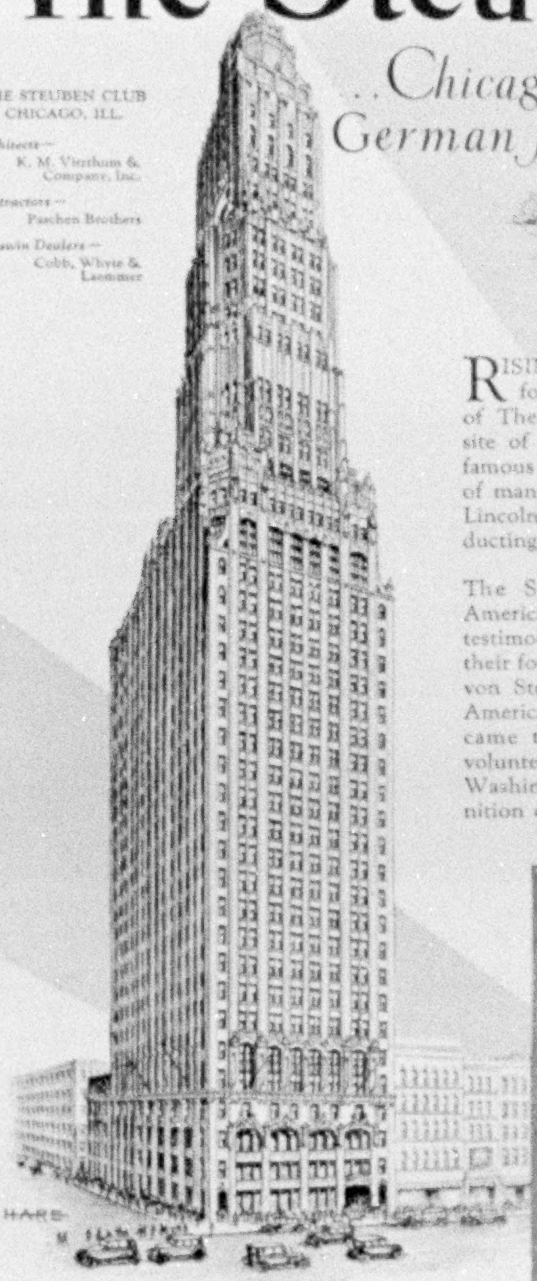
..Chicago's beautiful tribute ~ to a German friend of American liberty

THE STEUBEN CLUB
CHICAGO, ILL.

Architects —
K. M. Vitzthum & Company, Inc.

Contractors —
Paschen Brothers

Russwin Dealers —
Cobb, Whyte & Lammer



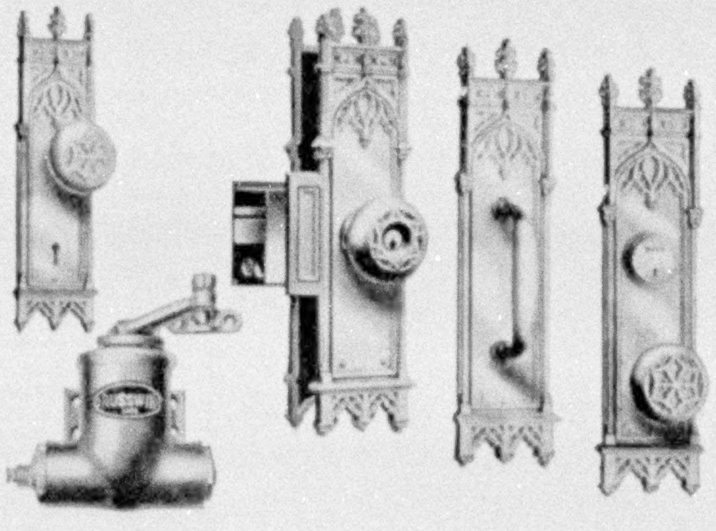
RISING majestically to a height of forty-eight stories, the new home of The Steuben Club stands on the site of the historic old Briggs House, famous as the Chicago dwelling place of many notables, including Abraham Lincoln who lived there while conducting his campaign for the Presidency.

The Steuben Club, founded by Americans of German descent as a testimonial to the illustrious deeds of their forefathers, was named for Baron von Steuben, who won fame in the American Revolution. Von Steuben came to this country in 1777 and volunteered his services to General Washington at Valley Forge. In recognition of his genius as an organizer of troops and as the author of the first manual of arms used by the United States Army, von Steuben was made Instructor General of the Continental Army with the rank of Major General.

The Steuben Building is one of the largest and most beautiful of its type in the world. The architecture is Modified Gothic, accentuated by a high receding tower with turret-like buttresses at the 27th, 34th, 38th and 43rd floors.

As is true of so many distinctive buildings — large and small — Russwin Hardware equipment was chosen because of its well-known reputation for quality, beauty of design and trouble-free service.

A FEW RUSSWIN CREATIONS

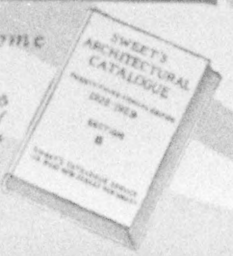


R&E
SINCE 1839
RUSSWIN
RUSSELL & ERWIN
DISTINCTIVE HARDWARE

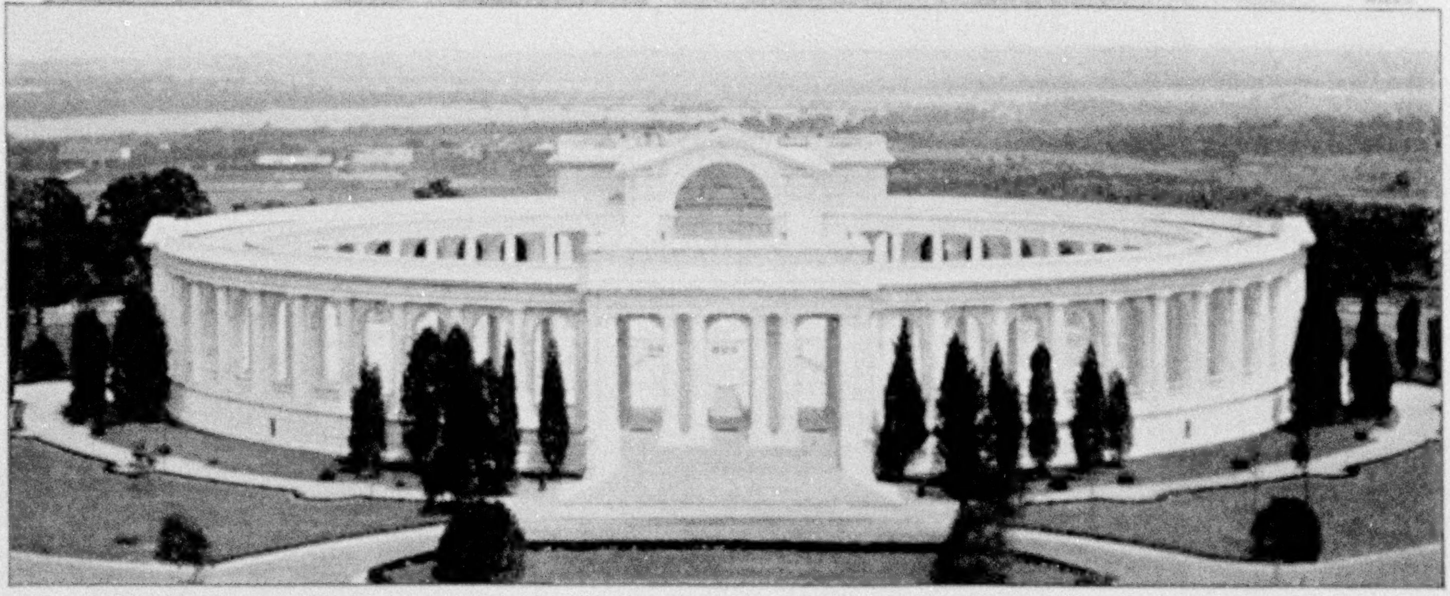
Hardware that lasts — Base Metals of Bronze or Brass

for the Bungalow · · · the Pretentious Home · · the Monumental Structure · ·

See pages 2519-2595 for a catalogue of Russwin Hardware



RUSSELL & ERWIN MFG. CO. NEW BRITAIN, CONN.
The American Hardware Corporation, Successor
NEW YORK CHICAGO LONDON



HISTORY marches along. Count . . . count . . . count . . . count . . . the heroes of a hundred years or more. Washington taking his first command . . . Pershing, home from France! Soldier-sons and sailor-sons marching down the years in a pageant of youth and devotion, of great leaders, great sacrifices, great causes won! In honor of them, the great Arlington Memorial Amphitheatre represents the whole nation's measureless desire to express and perpetuate its gratitude.

They built this hallowed Shrine of Service *entirely of Vermont Marble*, that its matchless splendor and significance might last as long as the nation shall endure. Before its portal, they laid at rest the Unknown Soldier in a Vermont Marble tomb, giving into his keeping forever the fame and name of all our battle-heroes.

Old as the nation is the tradition of Vermont Marble's excellence. It represents established culture, permanence and sound economy in investment, because it is strong, enduring and beautiful. Today, there are varied types of Vermont Marble for every architectural, decorative and memorial purpose . . . always available in every American city.

"All That is Beautiful Shall Abide Forever"

Write for this booklet illustrating the 12 basic types of designs used in modern family memorials. The services of our Dept. of Memorial Design are available through local Master Craftsmen in Marble in every American city.

The Memory Stone

VERMONT MARBLE COMPANY

Dept. G-5

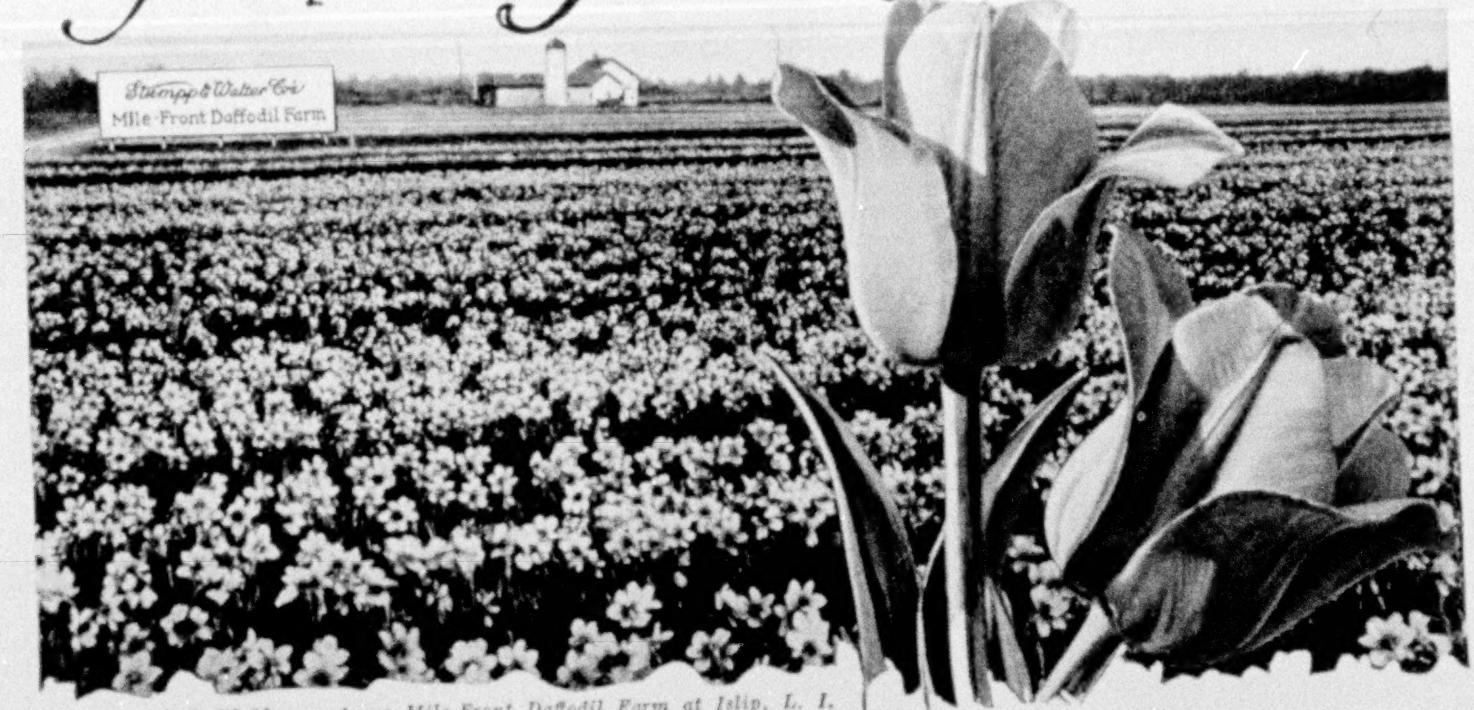
PROCTOR, VERMONT

World's Largest Quarriers of Marble

VERMONT MARBLE

ALL THAT IS BEAUTIFUL SHALL ABIDE FOREVER

Choice Daffodils and Tulips
for April and May Blooming



Six million Daffodil blooms at our Mile-Front Daffodil Farm at Islip, L. I.

Daffodils in late April and Tulips in May are the most popular Spring Flowering Bulbs.

DAFFODILS

Since the embargo against the importation of Dutch Grown Daffodil Bulbs, we have been producing 53 of the Finest, New and Rare varieties on our Long Island Daffodil Farm. Bulbs are now being produced in as good a quality as formerly imported and at reasonable prices.

In order to encourage their wider use, we are making a Special Offer of

Six Fine Varieties

Conspicuus (*Barrii*)—Large, broad-spreading perianth of pale yellow, short darker yellow cup, brightly edged orange-scarlet.

Lucifer (*Incomparabilis*)—Perianth sulphur-white with long, well-rounded petals; cup chrome-yellow with intense orange-scarlet suffusions.

Queen of the North (*Leedsii*)—Broad, large perianth of clear, glistening white and remarkable texture; cup soft primrose-yellow with narrow rim of sulphur-white.

Sir Watkin (*Incomparabilis*)—Perianth primrose-yellow; large and well-formed yellow cup, tinted deep yellow. A giant among the Medium Trumpet sorts.

Spring Glory—One of the finest Giant Trumpet varieties. Clear white perianth with long petals of splendid form, long trumpet of deep yellow, well reflexing at the brim.

Vanilla—An excellent Giant Trumpet variety. A fine, bold trumpet of deep yellow with a paler perianth.

Special Collection Offer

10 Bulbs each of the above 6 varieties, 60 Bulbs..$ 7.00
25 Bulbs each of the above 6 varieties, 150 Bulbs.. 15.00
100 Bulbs each of the above 6 varieties, 600 Bulbs.. 50.00

A Garden Full of Daffodils—100 Bulbs for $7.00

In order to acquaint our patrons with the desirability of planting a mixture of Daffodil Bulbs in their foundation planting and shrubbery borders, we are offering a special mixture of Giant and Medium Trumpet varieties, taken from 10 named varieties, at a special price of $7.00 per 100.

TULIPS

May Flowering Tulips are perhaps the most popular of all the bulbous plants. Planted in clumps in the shrubbery border, the hardy border, or in formal beds, they are very valuable.

We are making a Special Offer of Tulips, including the Darwin, Breeder and Cottage sorts which bloom in May, of

Ten Fine Varieties

Baronne de la Tonnaye (*Darwin*)—A clear carmine-rose at the midrib, base toning off to soft pink at the edges; white tinged blue. Height 26 inches.

Bronze Queen (*Breeder*)—Soft golden bronze; large flower of sturdy habit. Height 28 inches.

Cardinal Manning (*Breeder*)—A beautiful shade of rosy violet, with a slight edge of bronze. Height 28 inches.

Clara Butt (*Darwin*)—A fine, clear salmon-pink. No other variety offered by us has the same distinctive and pleasing color. Height 22 inches.

Farncombe Sanders (*Darwin*)—A bright shade of scarlet with a clear white base, contrasting well when the flower is fully open. Height 25 inches.

Inglescombe Yellow (*Cottage*)—It greatly resembles the Darwins, so much so that it is frequently called the "Yellow Darwin." A rich yellow, which becomes edged watermelon-pink as the flower ages. Height 22 inches.

Louis XIV (*Breeder*)—An even tone of dark purple with a broad margin of golden bronze. Height 30 inches.

Moonlight (*Cottage*)—Bright canary-yellow; large flower, oval in shape, outer petals slightly reflexed at the tips. Height 22 inches.

Painted Lady (*Darwin*)—A pale creamy white with a faint tinge of heliotrope, gradually becoming almost pure white as the flower ages. Height 27 inches.

Reverend Ewbank (*Darwin*)—An exquisite shade of soft lavender-violet, slightly shaded silver-gray. Height 23 inches.

Special Collection Offer

10 Bulbs each of the above 10 varieties, 100 Bulbs.$ 6.00
25 Bulbs each of the above 10 varieties, 250 Bulbs. 14.00
100 Bulbs each of the above 10 varieties, 1,000 Bulbs. 50.00

A Garden Full of Darwin Tulips—100 Bulbs for $4.00

In order to acquaint our patrons with the number of lovely colors that occur in Darwin Tulips, we offer a mixture, especially prepared by us, of 15 distinct, tall-growing varieties, at a special price of $4.00 per 100.

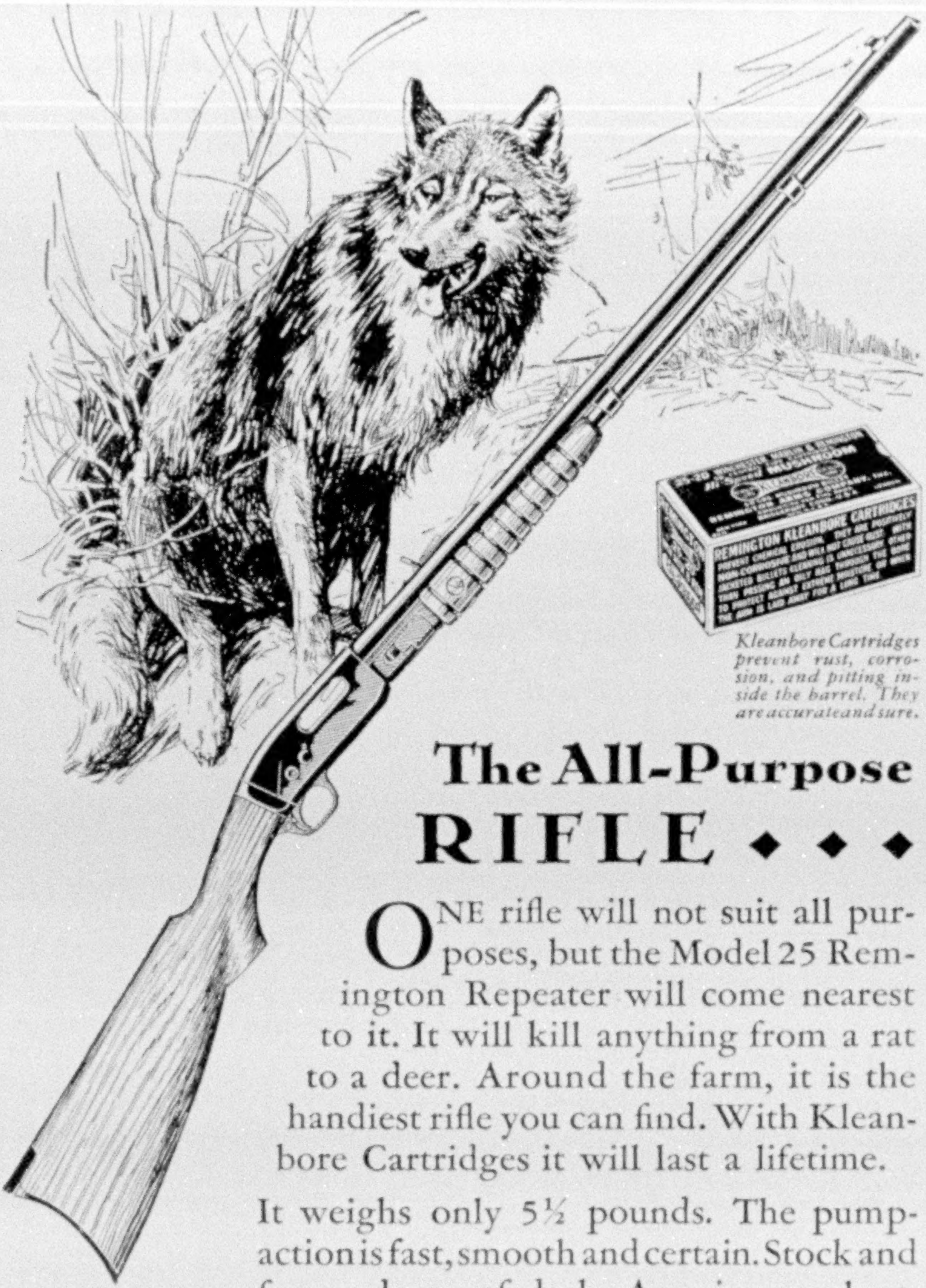
Our Catalog
"Bulbs for Autumn Planting"
It features the Finest Tulips, Daffodils, Hyacinths, Crocus, Lilies and other Miscellaneous Bulbs for Autumn Planting. Sent on request.

Stumpp & Walter Co

30-32 Barclay Street, New York

Order Your Bulbs Now

One of the Largest Growers and Importers of American, Dutch, French and Japanese Bulbs for Discriminating Flower Lovers in the United States



Kleanbore Cartridges prevent rust, corrosion, and pitting inside the barrel. They are accurate and sure.

The All-Purpose RIFLE ◆ ◆ ◆

ONE rifle will not suit all purposes, but the Model 25 Remington Repeater will come nearest to it. It will kill anything from a rat to a deer. Around the farm, it is the handiest rifle you can find. With Kleanbore Cartridges it will last a lifetime.

It weighs only 5½ pounds. The pump-action is fast, smooth and certain. Stock and fore-end are of dark, American walnut. It's a beauty to look at and a joy to shoot.

Made also in .32 caliber and in carbine size. See the Model 25 at your dealer's. Write for descriptive circular.

Model 25 Remington Repeating Rifle. Price, Standard Grade
$29.95

REMINGTON ARMS COMPANY, Inc.
113 Years of Quality
25 Broadway New York City

Remington

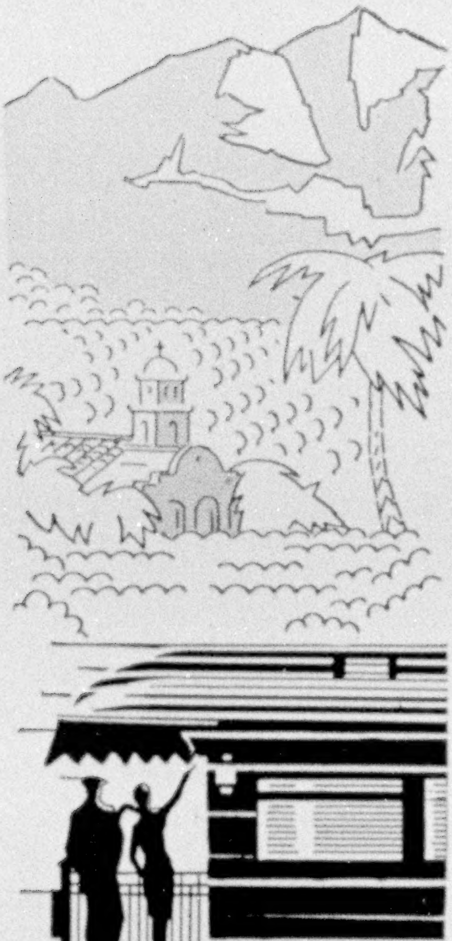
© 1929 R. A. Co.

2560

Union Pacific

··LOS ANGELES LIMITED

A DELUXE TRAIN NO EXTRA FARE



Aboard the Los Angeles Limited, travelling becomes a luxurious diversion — 63 hours of restful adventure.

Train features — Observation club car, dining cars serving the finest of meals, Pullmans, modern to the moment, barber, valet, bath, maid and manicure. *The route* —marvelously smooth, through the West's most magnificent scenery. These are the factors that have made this train famous the world over.

Make your next journey to California on the Los Angeles Limited. We predict that you too will become one of its ardent admirers. Leaves Chicago 8:10 P. M.

Eight Other Fine Trains to California from Chicago and St. Louis

Including the new 58 hour extra fare Overland Limited, finest and fastest train between Chicago and San Francisco; 63 hour all-Pullman San Francisco Limited; Gold Coast Limited; Continental Limited; Pacific Limited; Pacific Coast Limited.

Send coupon today for California, Death Valley or Hawaii booklets which fully describe these winter playgrounds and the Overland Route's famous fleet of fine trains.

CALIFORNIA

C. J. Collins, Gen'l Passenger Agent, Dept. 357
Union Pacific System, Omaha, Neb.
Please send me complete information including booklets on California ☐ Death Valley ☐ Hawaii ☐

Name________________________________

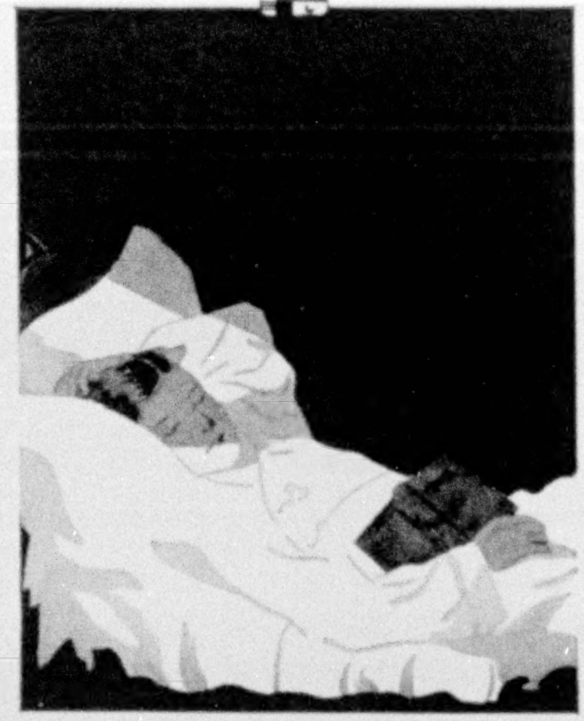
Street________________________________

City____________________ State____________

Union Pacific

THE OVERLAND ROUTE

GOOD NIGHT



The Book-Cadillac Hotel
ON WASHINGTON BOULEVARD
THE STREET OF FINE SHOPS
DETROIT

Good night

Asleep . . . at the switch . . . The day was tough and it was long. The night is still. The bed is soft . . . and he smiled and he stretched straight out to read. Cool little friendly winds from over the waters sent satisfying summer shivers . . up . . and . . down and he pulled a woolly blanket a little higher and snuggled a little deeper. A far ferry sang its long drawn night song . . . Oooooo . . . Ooo Oooooo . . Oo . . Oo . . . and he listened . . . for the answer. The tale he read made him even drowsier. Quiet. Tired eyes closed . . the book dropped . . . the light burned on. . . . *He slept* . . . and busy care turned and hung his head and rode his horses down a hill. . . . *Good night*. See you soon.

THE BOOK-CADILLAC HOTEL
Carl M. Snyder, Managing Director
DETROIT

Arch of Triumph,
Paris

Next Year Make Your Travel Dreams Come True!

EUROPE—1930

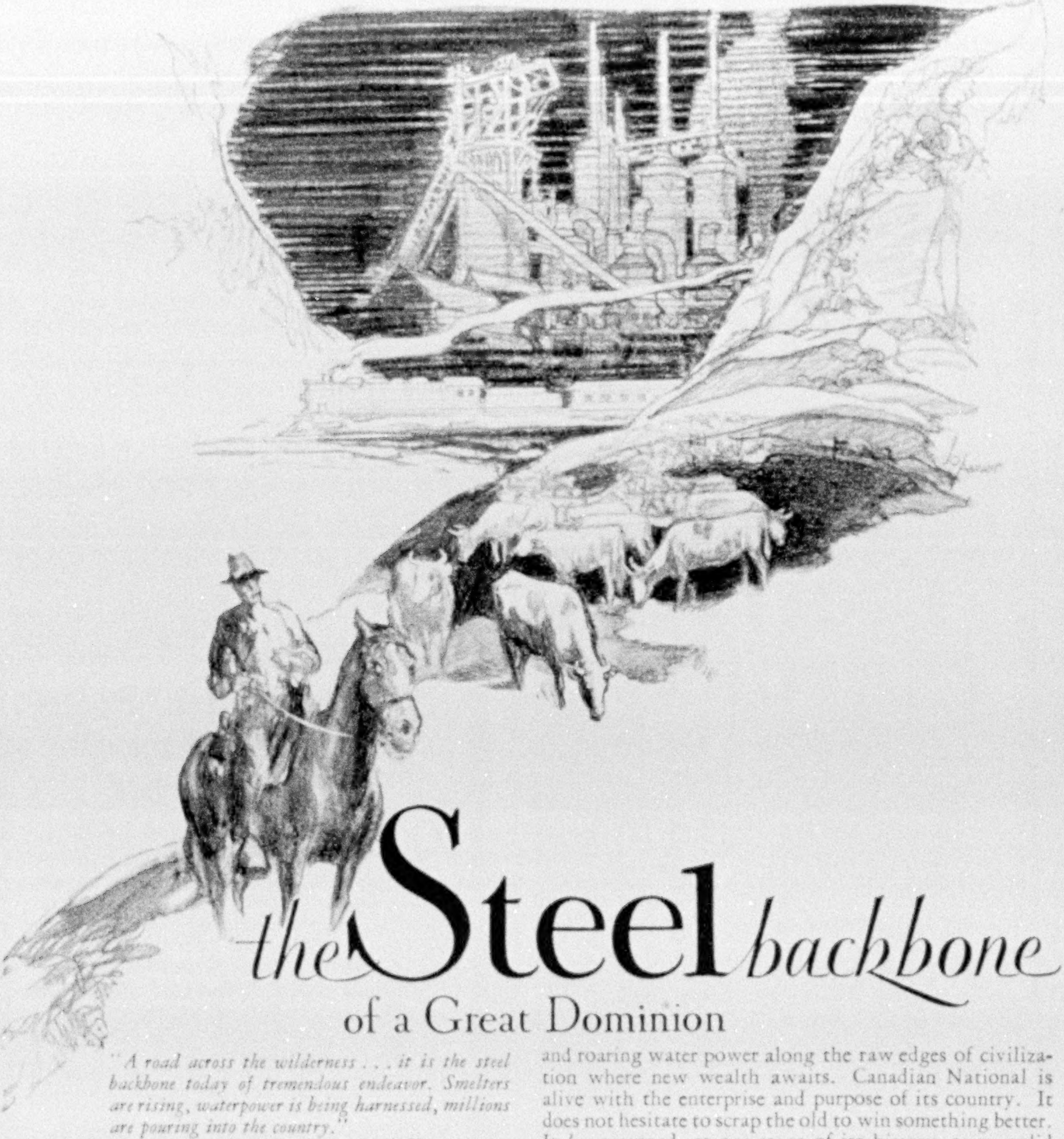
Fascinating journeys abroad . . . on the highways . . . on the byways . . . have been planned by Art Crafts Guild Travel Bureau for the discriminating European traveler in 1930. If you expect to visit Europe next year (Passion Play year at Oberammergau) let us help you make your plans and secure your reservations early. Write today for the Guild's booklets of European Travel:

"Journeys Abroad"—a 64-page booklet presenting high lights of many countries and suggestions for travel throughout the world. The Foreign Independent Travel department of the Guild will arrange every detail of your journey, make all reservations in advance and assist you at every move en route. Ask for booklet 'JA' describing this service.

"House Party Tours of Europe" — An outline of conducted tours from one to three months in duration. Economically priced: England, Belgium, Holland, France, Germany, Switzerland—all expenses, $450. . . . Thousands of Guild clients have enjoyed these tours in past seasons. Ask for Booklet "E30".

ART CRAFTS
GUILD TRAVEL BUREAU
Dept. 300, 180 N. Michigan — CHICAGO
32 St. James St., London 33 Avenue de l'Opera, Paris

TO EVERYWHERE IN CANADA



the Steel *backbone*

of a Great Dominion

> *"A road across the wilderness . . . it is the steel backbone today of tremendous endeavor. Smelters are rising, waterpower is being harnessed, millions are pouring into the country."*
>
> SIR HENRY W. THORNTON,
> CHAIRMAN AND PRESIDENT,
> CANADIAN NATIONAL RAILWAYS.

ACROSS Canada stretches the largest railway in America—the steel back-bone, the nerve and sinew, of a great Dominion. With over 23,000 miles of tracks, a chain of hotels, steamships, a telegraph system, radio stations, an express service, it joins the Atlantic to the Pacific and the Great Lakes to the shores of Hudson Bay. It links the spreading cities of older Canada to golden prairies, to rugged Rockies, to mining camp and smelter, and roaring water power along the raw edges of civilization where new wealth awaits. Canadian National is alive with the enterprise and purpose of its country. It does not hesitate to scrap the old to win something better. It *has* scrapped, at one stage of its history, seven solid miles of locomotives to make room for new and more powerful ones. It has put a whole town on flat cars and rebuilt it twenty miles away to make a better terminus. It has permitted nothing to block the unceasing urge to new achievement.

Canadian National is your open door to Canada. Its trains and its service extend from your home to the furthest corner of the Dominion. It gives you the luxury of its hotels and vacation resorts, takes you where the game fish leap, meets every need of travel or accommodation.

CANADIAN NATIONAL

BOSTON
333 Washington St.

BUFFALO
420 Main St.

CHICAGO
4 S. Michigan Ave.

CINCINNATI
49 E. Fourth St.

CLEVELAND
925 Euclid Ave.

DETROIT
1523 Washington Blvd.

DULUTH
430 W. Superior St.

KANSAS CITY
705 Walnut St.

LOS ANGELES
607 So. Grand Ave.

MINNEAPOLIS
518 Second Ave. So.

NEW YORK
505 Fifth Ave.

PHILADELPHIA
1422 Chestnut St.

PITTSBURGH
355 Fifth Ave.

PORTLAND, ME.
Grand Trunk Ry. Sta.

PORTLAND, ORE.
302 Yamhill St.

ST. LOUIS
314 No. Broadway

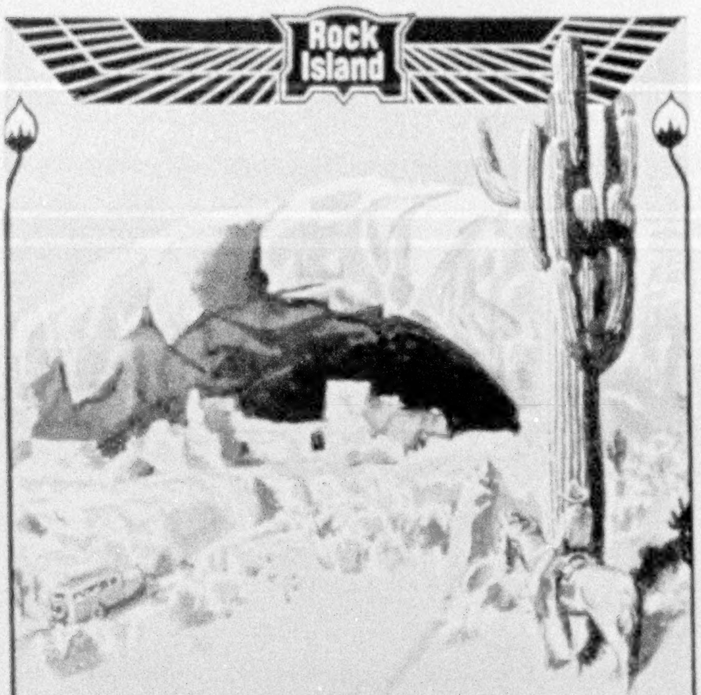
ST. PAUL
83 East Fifth Street

SAN FRANCISCO
689 Market St.

SEATTLE
1329 Fourth Avenue

WASHINGTON, D.C.
901—15th St., N. W.

THE LARGEST RAILWAY SYSTEM IN AMERICA



NEW
GOLDEN
STATE
LIMITED
TO
CALIFORNIA

Across the First Page of American History

Thru the land of the Apache Trail—where history was in the making when Rome was "Growing up to Might"—pre-historic cliff-dwellings and ruined temples, old as the Coliseum—thoroughfares, time-worn as the Appian Way. Luxurious hotels and facilities for every outdoor sport invite a stopover. Enjoy a marvelous 120 mile, one-day drive over the weirdly beautiful Apache Trail.

America's Newest, Finest Train

Most Convenient Schedule
—Only 2 days Chicago to California—
3 days from Coast to Coast.

Every Travel Luxury—No Extra Fare

Rock Island—Southern Pacific
Golden State Route

Best and shortest way Chicago to El Paso, Tucson, Chandler, Phoenix, Indio and Palm Springs. Quickest by hours. Thru sleepers from St. Louis and Minneapolis.

Direct low altitude route to
Los Angeles and San Diego

ROCK ISLAND

THE ROAD OF UNUSUAL SERVICE

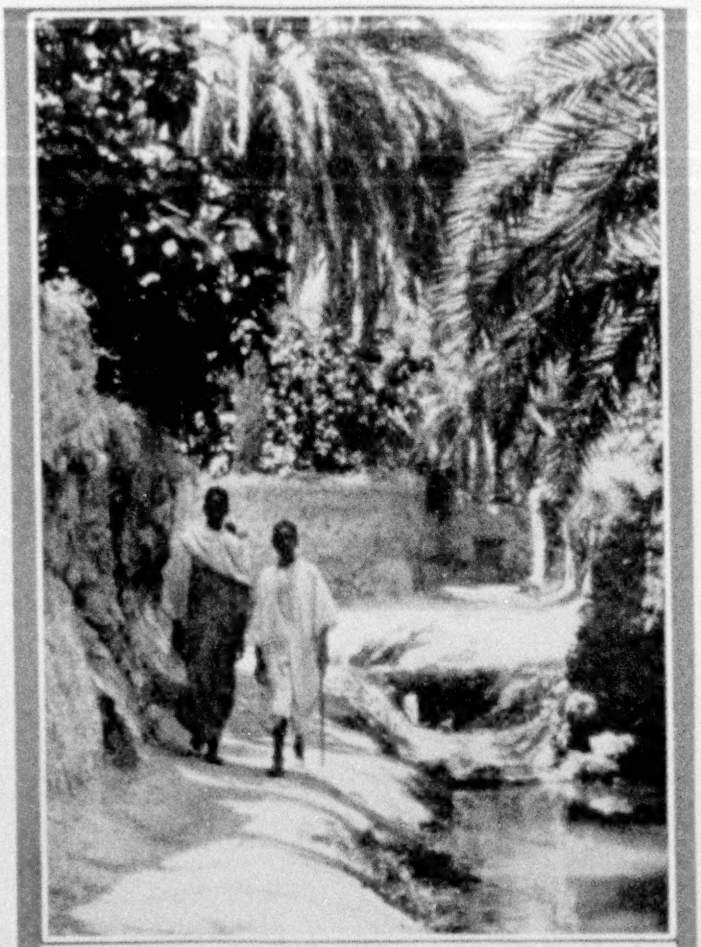
For detailed information mail this coupon

Rock Island Vacation Travel Service Bureau
759 La Salle Street Station, Chicago, Ill.

Please send me literature descriptive of Arizona and California and full information regarding train schedules and service via Golden State Route.

Name ....

Address ....



Brilliant with Palm Trees and Drunk with Flowers

WHY not spend the holidays in North Africa, the latest playground of the international set? ❦ Algiers above a brilliant sea... the clothes of Cannes, the shops of Paris and the Arabian Nights, the backdrop of a pirate town . . . the Sahara beyond. ❦ Forty-six smart "Transat" hotels at which to stay. ❦ Join one of the Mediterranean-Moroccan Cruises across the South Atlantic by the

S. S. "*France*"

Jan. 11..Feb. 12..Mar. 15..Apr. 25

Cross "the longest gangplank in the world" to the "*Ile de France*", the "*Paris*" or the "*France*" with people who take the only transatlantic French cuisine for granted, who know that chic and gayety are where they choose to be. ❦ FIVE days to Plymouth for London. ❦ Then . . . the covered pier at le Havre and the three-hour boat train for Paris. ❦ Overnight, Marseilles . . . twenty-four hours across the Mediterranean, Algiers.

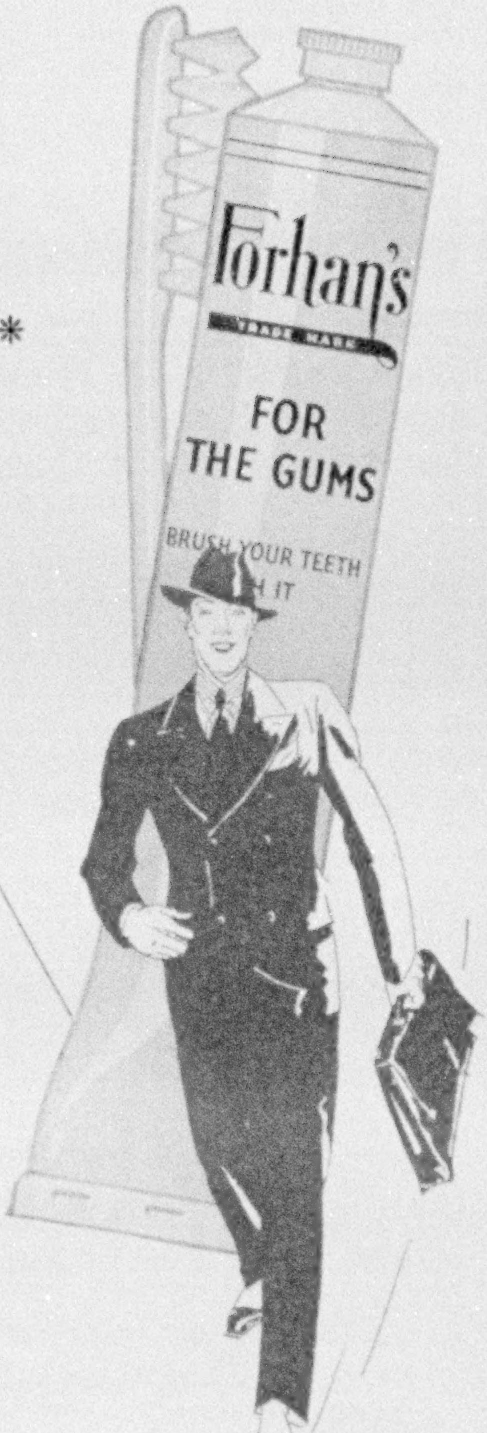
• French Line •

Information from any authorized French Line Agent, or write direct to 19 State Street, New York City.

Danger lurks behind white teeth

NOBODY'S IMMUNE*

**the disease-of-neglect ignores teeth, attacks gums and claims 4 out of 5 as its victims*



WHITE teeth are attractive. Their soundness contributes to the preservation of good health. But remember, teeth are only as healthy as the gums. And however white they may be, danger lurks behind them.

For certain prevalent diseases-of-neglect ignore teeth and attack the gums. And when once contracted only expert dental treatment can stem their advance. Too many of us disregard this threat. And as the penalty for neglect, 4 persons out of 5 after forty and thousands younger sacrifice health. A needless sacrifice!

These odds are unfair, deceiving. This simple regime brings protection: See your dentist at least once every six months. And when you brush your teeth, brush gums vigorously with the dentifrice made for the purpose... Forhan's for the Gums. This dentifrice helps to firm gums and keep them sound. Thus it fortifies teeth and health. As you know, Pyorrhea and other diseases seldom attack healthy gums.

In addition, the way in which Forhan's cleans teeth and helps to protect them from decay will delight you.

Start using Forhan's, regularly, every morning and every night. Teach your children this good habit. They'll thank you in the years to come. Get a tube of Forhan's from your druggist. Two sizes, 35c and 60c. Forhan Company, New York.

Forhan's for the Gums is more than an ordinary toothpaste. It is the formula of R. J. Forhan, D. D. S. It is compounded with Forhan's Pyorrhea Liquid used by dentists everywhere. You will find this dentifrice especially effective as a gum massage if the directions that come with each tube are followed closely. It's good for the teeth. It's good for the gums.

YOUR TEETH ARE ONLY AS HEALTHY AS YOUR GUMS

Forhan's
FOR THE GUMS

XUM

WHY NOT
Be Comfortable
when you
read?

Complete Relaxation Without Eye-Strain—A New Delight for All Who Read—A Lifelong Investment in Convenience

If you like to read, here is a convenience you have long been looking for. Now you sit back in your favorite chair, adjust the Mitchell Lap Table at precisely the proper angle and read in solid comfort! No eye-strain. No tedious holding of the book or magazine. Your body muscles are at rest; your energies concentrated on the message before you. One of life's most pleasant recreations is made even more pleasant!

Dozens of Uses

The Mitchell Table enables you to read or breakfast comfortably in bed; to write, figure or draw in your coziest chair. A blessing to invalids; an appreciated convenience on vacation, in traveling and at outings; a distinctive and useful gift.

Endorsed by Hundreds

"I've always wanted something of the kind but did not know it was on the market."—Mrs. E. H. Blanchard, St. Louis.

"Wonderful, well worth the money." R. Kessler, Vineland, N. J. Appreciated by all who know the joy of reading and the value of conserving the eyes.

Lasts a Lifetime. Special laminated wood, attractively finished in walnut or mahogany. Nothing to wear or get out of order. Adjusted by two simple thumb nuts. Folds to 1⅜ in. thickness.

Five Days' Trial—Send No Money. Simply return the coupon. Pay the postman $6.50 on delivery. Enjoy the comfort of easy reading, in bed or your easy chair. Note the dozens of uses. See the healthful effect on children. If not delighted in five days, return the table and your money will be refunded in full; otherwise it is yours for a lifetime of service. The coupon is for your convenience. Won't you send it in today?

At last a means of eating comfortably in bed. An ideal gift for invalids.

Write, sketch or draw in your favorite easy chair.

Read in bed without eye-strain or muscle strain. (Price of lamp complete with cord and bulb, $5 extra.)

An Ever-Appreciated Christmas Gift

Write for descriptive circular or, better still, try the Mitchell for 5 days in your own home.

MITCHELL MOULDING CO.
Dept. 3210, Forest Park, Ill.

Send me, postpaid, a Mitchell Lap Table in ☐ Mahogany finish ☐ Walnut finish. I will pay the postman $6.50 on delivery. It is understood that I am to have the privilege of returning the table within 5 days if not entirely satisfied.

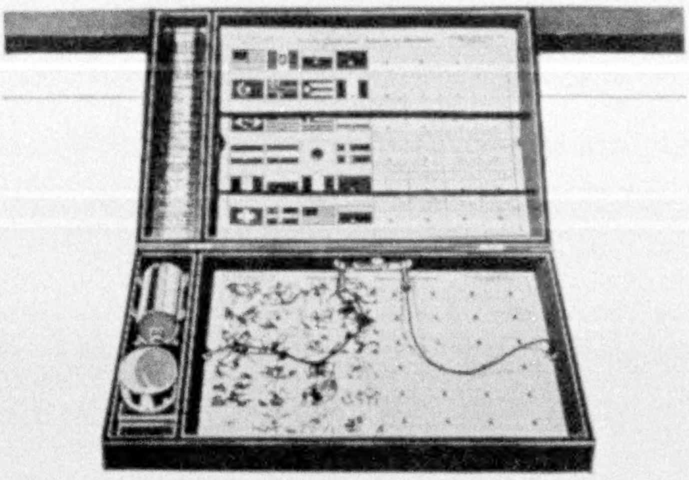
Name ....

Street Address ....

City .... State..............

☐ Check here if lamp is also desired. Price $5.

Money Back if Not Satisfied



Your Child Can Lead the Class

The child who owns a Knapp Electric Questioner stands out in any class room. The absorbing interest in the Questioner lasts for months and years. You can keep it up to date indefinitely. The mysterious buzzing answer thrills and puzzles, indelibly impressing the correct answer on their minds. Operates from a flash light battery (furnished). The ideal Christmas present.

If your dealer is sold out, send us $3.50 ($3.75 Denver and West) and we will send the Questioner postpaid. Satisfaction guaranteed or money refunded. Ask for circular No. 22.

KNAPP ELECTRIC, INC. **Established 1890**
Division of P. R. Mallory & Co., Inc.
Indianapolis, Ind.

KNAPP ELECTRIC QUESTIONER

Write *for* FREE Catalog Showing

Soft, Luxurious
Olson **RUGS**

America's
Newest, Finest
LOW PRICED
Rugs

Largest Factory in the world dealing direct with the home. We pay transportation from all states. We have **No Agents.**

Made *from Your Old* Materials

We reclaim the valuable wool in your old rugs and clothing by our Patented Process and weave new, seamless, reversible rugs at a saving of one-half. **43 Oriental, Plain** or **Two-toned** patterns. Any size in a week. We guarantee to satisfy or pay for your materials.

OLSON RUG CO.
Mail to 82 LAFLIN ST., CHICAGO, Dept. E-63
SEND FREE CATALOG TO:
Name ....
Address ....
City ....
State ....

Sometimes husbands must be *mothered*

"Strictly between ourselves, Alice, sometimes the only way to handle these obstinate men is simply to give them what's good for them.

"For instance, I knew that coffee at dinner was keeping John awake, but he just talked about business strain and refused to admit that coffee affected him at all.

"Finally I asked Uncle Walter, who is a nerve specialist, about it. Uncle Walter said to give John Kaffee Hag Coffee. 'He won't notice any difference,' he said, 'but it won't hurt him. The caffeine is taken out of it.'

"Well, my dear, I did it, and John never noticed the change. But after a week he began to notice that his sleep had improved, and remarked on it. Then I told him the reason. Now we're never going to have anything but Kaffee Hag Coffee again."

Try Kellogg's★ Kaffee Hag Coffee yourself. It is *real* coffee, with 97% of the drug caffeine removed. You will delight in its flavor and cheer at every meal and it will not affect sleep or nerves.

Served by hotels, dining-cars, restaurants. Sold by all dealers in vacuum-sealed cans that preserve freshness. Steel cut or in the bean. Order a can today. Or mail the coupon for a generous sample.

COFFEE
KAFFEE HAG

KELLOGG COMPANY
Dept. 1934, Battle Creek, Michigan

Please send me, postpaid, enough Kaffee Hag Coffee to make ten cups. I enclose ten cents (stamps or coin).
(*Offer good in U. S. A. only*)

Name____________________

Address____________________

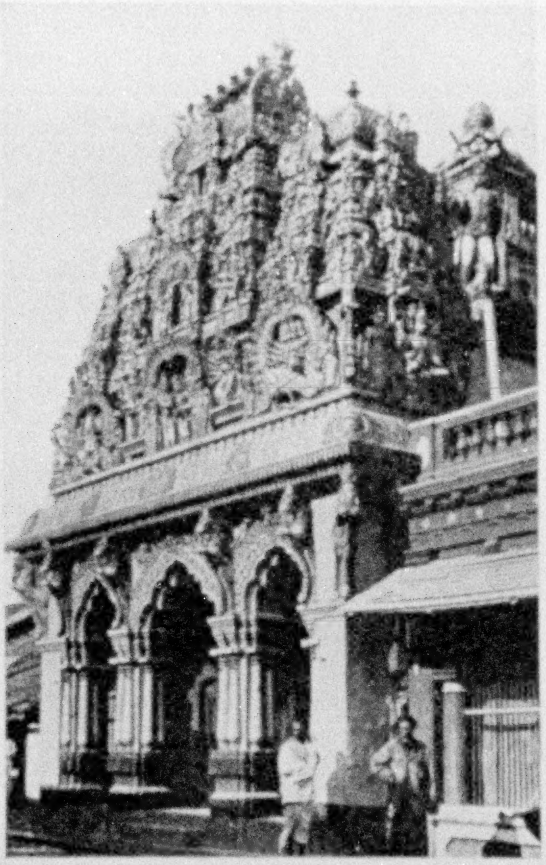
★Now a Kellogg product

KAFFEE HAG COFFEE

The coffee that lets you sleep

XUM

AROUND THE WORLD
On the Cunard Super-Cruising Steamer
FRANCONIA
Sailing From New York January 11 Next



Hindoo Temple, Ceylon

An Enchanting Fairyland

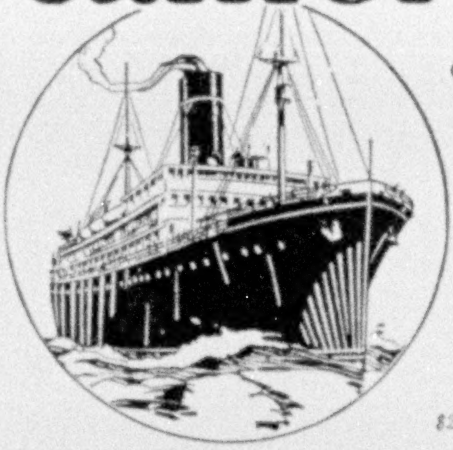
Ceylon—called the "Eden of the Eastern Wave", so fascinating is its tropical loveliness. Here in the land of gems, palms and elephants, you'll be but 'forty miles from heaven' and stand in cinnamon gardens that rustle above foam-crested rapids. You'll see the yellow togas of monks, and coolies plucking tea buds . . . in the evening you'll feel the gentle breeze of punkahs swayed by unseen brown hands . . . in Colombo, Mt. Lavinia and Kandy, Peradeniya and Katugastota . . . just part of this living pageant of the East.

A complete world panorama in 138 glorious, pleasure-packed days; a prodigious itinerary presenting a route of endless interest, including ports never before visited by any World Cruise . . . Amoy, Malacca, Pasuruan, Surabaya. Perfection of detail for comfort, luxury and pleasure on land and sea made possible by the combining of two such world-famed travel exponents with their 177 years of experience.

Literature and full information from your local agent or

CUNARD LINE
or
THOS. COOK & SON

SCENIC CRUISES TO AND FROM
california
and
New
York
Via the "Spanish Americas"



$350 up
WATER-RAIL
$250 Up, One Way Water

YOU will visit 9 ports in South America, Panama Canal, Central America and Mexico. (HAVANA, Eastbound). Circle tours from your home town on main line points and back. First class transportation, meals and bed on steamer. Stop-over privileges at Apache Trail, Yellowstone, Grand Canyon, Yosemite. Slight additional cost via Portland, Seattle, Vancouver and Canadian Rockies. Sailings every two weeks east and west.
Write for Booklet "N"

PANAMA MAIL S. S. CO.

2 Pine St. San Francisco	10 Hanover Sq. New York	548 So. Spring St. Los Angeles

JOHN HANCOCK SERIES

Suffered Loss —
but secured $5400
Life Income

SUCH was the experience of a man of 65 whose plans for retirement received what seemed to be a serious setback. He found his solution in the purchase of an annuity. The limited space here does not afford all the details, but there was nothing remarkable about this man's experience. A number of such experiences are related in the readable booklet, "Life Incomes through Annuities," that we gladly send to all who are giving thought to what their incomes will be in the latter years of life.

The Annuity Plan offered by this company will solve for many thousands of business men the very vital problem of income during the let-down period of life. The plan is so different from the usual forms of life insurance that we have prepared this special treatise. May we send it with our compliments? Use the form below.

INQUIRY BUREAU
John Hancock
MUTUAL
LIFE INSURANCE COMPANY
OF BOSTON, MASSACHUSETTS
197 Clarendon Street, Boston, Mass.

You may send me your booklet, "Life Incomes Through Annuities."

Name..

Address..

N.G.

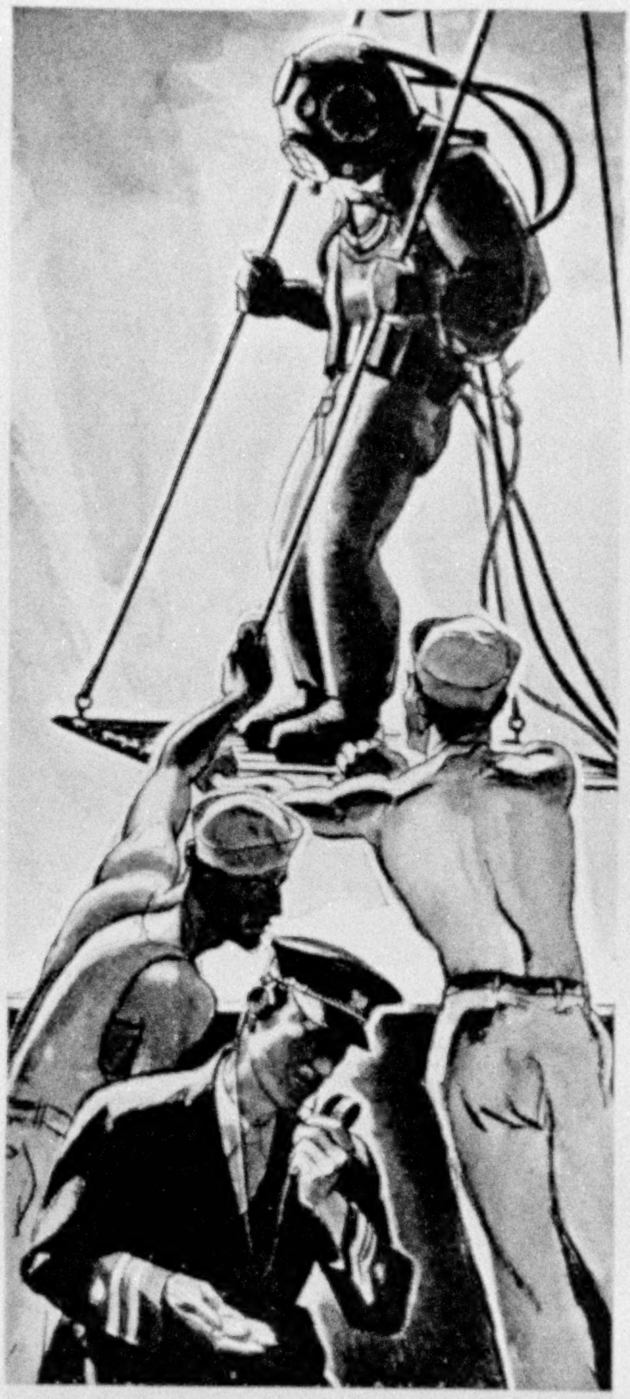
OVER SIXTY-FIVE YEARS IN BUSINESS

When minutes mean life itself... *ELGIN keeps the time*

Commander Ellsberg *who raised the sunken submarine S-51. Author of "On the Bottom."*

Down twenty fathoms to the slither and muck of the ocean floor where death dwells in the queer green twilight, slowly sinks a diver.

On deck men stand intent at the air lines . . . eyes fixed to the stream of bubbles rising from the diver going down, eyes fixed to the air gauges . . . and to the creeping hands of an ELGIN.



For here . . . as the heroes of the Falcon salvaged the sunken submarine S-51 . . . life itself was measured by time. Let time fail . . . let a watch deceive the man at the air-pressure controls . . . and the "bends" will attack the diver . . . that strange deep-sea affliction that bends men into knots, that maims and twists and paralyzes . . . its perils are vividly set forth in Ellsberg's book "On the Bottom."

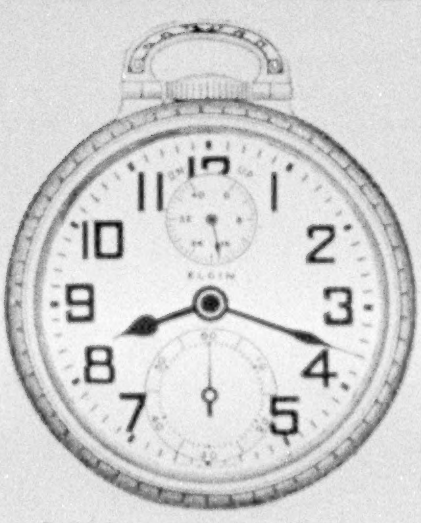
Here was no mild and ordinary test of timekeeping. Here was the grimmest, hardest test a watch can know. For here life itself was pinned to the hands of a watch.

The odds are certain that you will never don a diving suit and explore the ocean's depths. Perhaps you'll never pilot a plane . . . nor run a locomotive. Never call upon your watch to share in some vast heroic service. Yet there's pride in owning such a watch that would be worth the payment of a higher price.

But there is no higher price . . . ELGINS meet and compete in price with every watch of comparable quality. And as for its accuracy, its timekeeping, its utter dependability . . . ask Ellsberg . . . or any admiral, general, railroad man from engineer to president, ask any aviator who has told us . . . and you . . . how finely their ELGINS have served them. And just ask your jeweler to show you his array . . . as for ELGIN'S style and smart good looks.

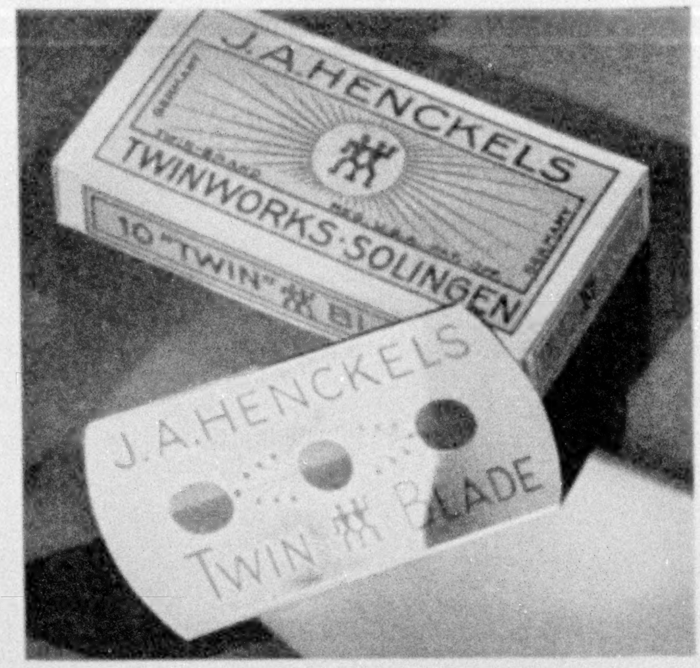
ELGIN WATCHES ARE AMERICAN MADE ©ELGIN, 1929

Elgin Legionnaire worn by Commander Edward Ellsberg. $24.



Famous B. W. Raymond model Elgin, 21 jewel $65

J·A·HENCKELS
TWIN BLADES
TWIN BRAND
REG. U. S. PAT. OFF.



The finest razor blades in the world

Thousands of men who already know the quality of J. A. Henckels fine cutlery, need no further introduction to J. A. Henckels Twin Blades. For they *know* that any piece of steel that bears the famous Twin Brand mark is the very finest of its kind.

Twin Blades are made of *barber razor steel* by the world-renowned guild craftsmen of J. A. Henckels in Solingen. Each blade is *hand-honed* and *hair-tested* to ensure absolute uniformity of keenness. You can depend upon Twin Blades *always* to give you the finest possible shave, 365 days out of every year.

Promise yourself this better shave. Your face will thank you for your discrimination. Get a package of Twin Blades *today*.

At all fine cutlery, hardware and department stores who sell J. A. Henckels Twin Brand cutlery. Also at the better drug stores. We shall gladly send you a trial blade for 10c.

TRIAL BLADE COUPON

J. A. Henckels Inc., 456 Fourth Ave., New York, N. Y.
Enclosed is 10c for a Trial Twin Blade.

Name..............................

Address..............................

Dealer's Name..............................

Dealer's Address..............................

J. A. HENCKELS FINE CUTLERY

Pocket Knives
Scissors and Shears
Razors, Safety Razors
Manicure Instruments

Household Knives
Professional Knives
Garden Cutlery
Wood Carving Tools

Table Cutlery
Carving Sets
Scissors, Manicure and Sewing Sets

SOUTH AMERICA

Rio de Janeiro · · · Santos
Montevideo · Buenos Aires

Broad decks—open air swimming pool—thru placid sun-caressed seas to Rio and Santos—romantic—gay—alluring—a week in Rio—then back home—within 30 days. You'll never forget them.

Or southward to Montevideo and Buenos Aires—a perfect climate there now—the seasons are reversed—a bracing crispness in the air spurs to a keener enjoyment of the delights of Buenos Aires. A thousand things to do and see.

Finest ships · Fastest time · 21,000 ton American steamers
Sail fortnightly from New York

AMERICAN LEGION — PAN AMERICA
SOUTHERN CROSS — WESTERN WORLD

Under U. S. Government Mail Contract

PROGRESO from NEW ORLEANS

Gateway to Yucatan—Mayan Indian Ruins—Ancient cities dating back to 96 B. C. Sailings from New Orleans every ten days by modern S. S. MUNPLACE — 7000 tons.

For Information, Rates and Reservations apply to any authorized tourist agency or

MUNSON STEAMSHIP LINES
67 WALL STREET · · NEW YORK CITY
Branch Offices: Philadelphia—Chicago—New Orleans

Mother! They like to read

Have you a child who is between 4 and 15 years of age? Those are the determining years—exultant, baffling, romantic, dangerous. Then, the young mind seizes on books, magazines, newspapers—to read, *read*, READ. Do you know exactly how to meet this problem? Do you know how to make *reading* exert its best influences on your child? A wonderful way has been found. It helps mother. It saves money in the purchase of books. It stimulates the child with keen interest. This plan is directed by the most widely recognized experts in the country:

PROF. M. V. O'SHEA, Head of Department of Education, University of Wisconsin

ELMA A. NEAL, Dir. of Elementary Education, San Antonio, Tex.

PROF. JOHN S. TERRY, N. Y. U. Department of English

DR. M. L. ROBINSON, Conductor of the famous course of Juvenile Story Writing, Columbia University

GORDON B. VOLLAND, World renowned craftsman of children's books. Expert of Illustrating.

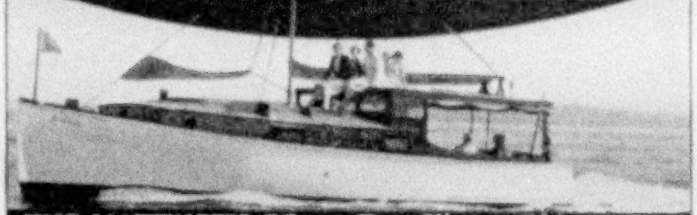
Write for details. No obligation.
Be sure to state the name and age of your child

CHILDREN'S BOOK CLUB, Box 402, One Park Ave., N.Y.C.

CRUISE AND LIVE IN COMFORT

"38" Matthews
SINGLE CABIN CRUISER

Go anywhere in a Matthews Cruiser. Take family and friends. Individual berths, galley, toilet room, mahogany dresser and buffet, wardrobes. Accommodates 6 to 9 persons. Sturdy, seaworthy salt-water construction. 6 cyl., 125 h. p. marine motor; speed 15-17 m. p. h. Write for folder N.



THE MATTHEWS CO., Port Clinton, Ohio, U. S. A.
Quality Service Since 1890

One reason why
this father won't
lapse his life insurance

THE PRUDENTIAL HAS THE STRENGTH OF GIBRALTAR

THE PRUDENTIAL INSURANCE COMPANY *of* AMERICA

EDWARD D. DUFFIELD, *President.* © HOME OFFICE, *Newark, N.J.*

The MONGOL for all general writing and other pencil uses. No. 2—Soft lead for medium lines—is the most popular degree. 5¢.

For the bookkeeper and accountant, MONGOL No. 3, hard lead. Makes small, neat figures. 5¢.

For the stenographer, MONGOL No. 2, (Pitman System)—MONGOL F, (Gregg System). 5¢ each.

"Will be of much service in all our departments"

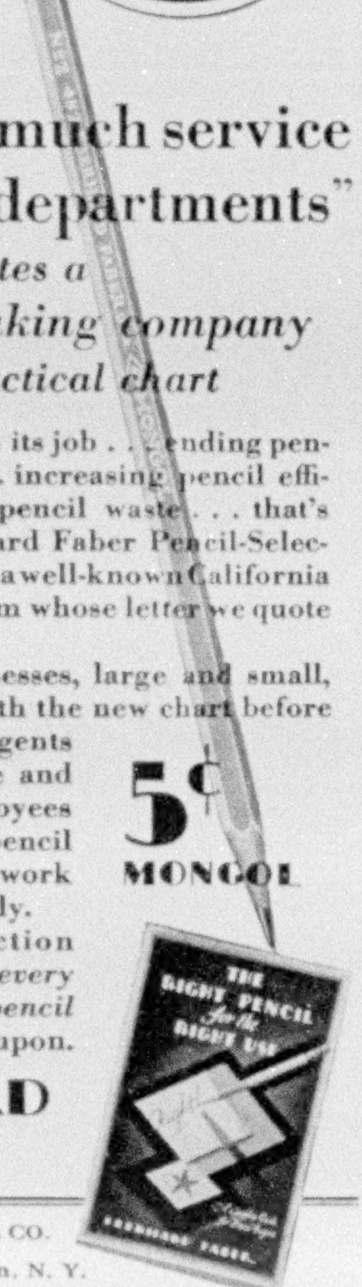
writes a California baking company of this practical chart

Fitting each pencil to its job . . . ending pencil dissatisfaction . . . increasing pencil efficiency . . . reducing pencil waste . . . that's what the new Eberhard Faber Pencil-Selection Chart is doing for a well-known California baking company, from whose letter we quote above.

Hundreds of businesses, large and small, now select pencils with the new chart before them. Purchasing agents find the chart a time and money saver. Employees . . . using the right pencil for each task . . . work faster, more efficiently.

The Pencil-Selection Chart is *FREE to every pencil buyer, every pencil user.* Just mail the coupon.

5¢ MONGOL



EBERHARD FABER

EBERHARD FABER PENCIL CO.
Dept. N-50
37 Greenpoint Ave., Brooklyn, N. Y.

Please send me FREE copy of the Eberhard Faber Pencil-Selection Chart which will help me select the correct type and degree of pencil for each purpose.

Name ....

Street ....

City .... State ....

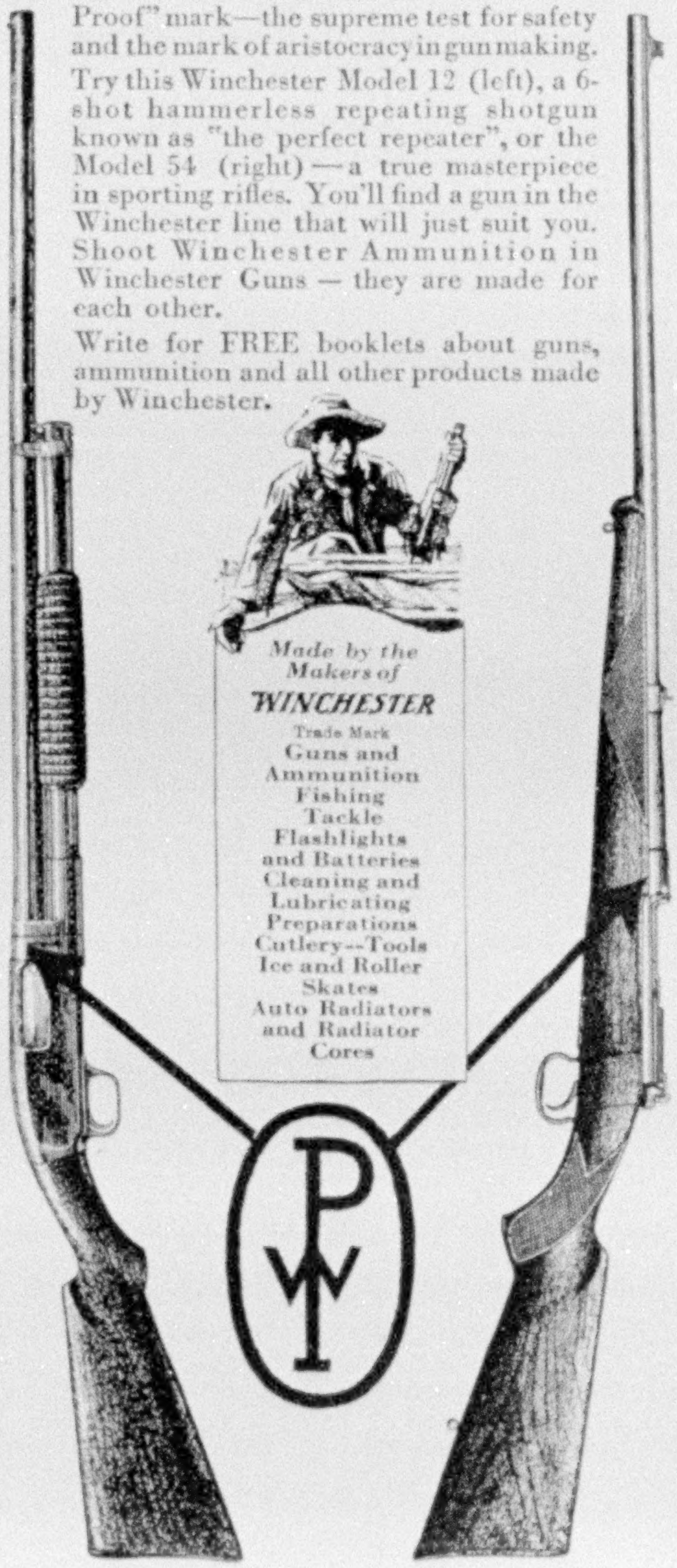
WITH THE CALL OF ALL OUTDOORS

—once more quickening your blood, it is time to take the field with a Winchester in hand

THERE'S a Winchester Rifle or Shotgun for every shooting purpose—dependable, close shooting, beautiful in balance and in action and stamped on barrel and receiver with the "Winchester Proof" mark—the supreme test for safety and the mark of aristocracy in gun making.

Try this Winchester Model 12 (left), a 6-shot hammerless repeating shotgun known as "the perfect repeater", or the Model 54 (right)—a true masterpiece in sporting rifles. You'll find a gun in the Winchester line that will just suit you. Shoot Winchester Ammunition in Winchester Guns—they are made for each other.

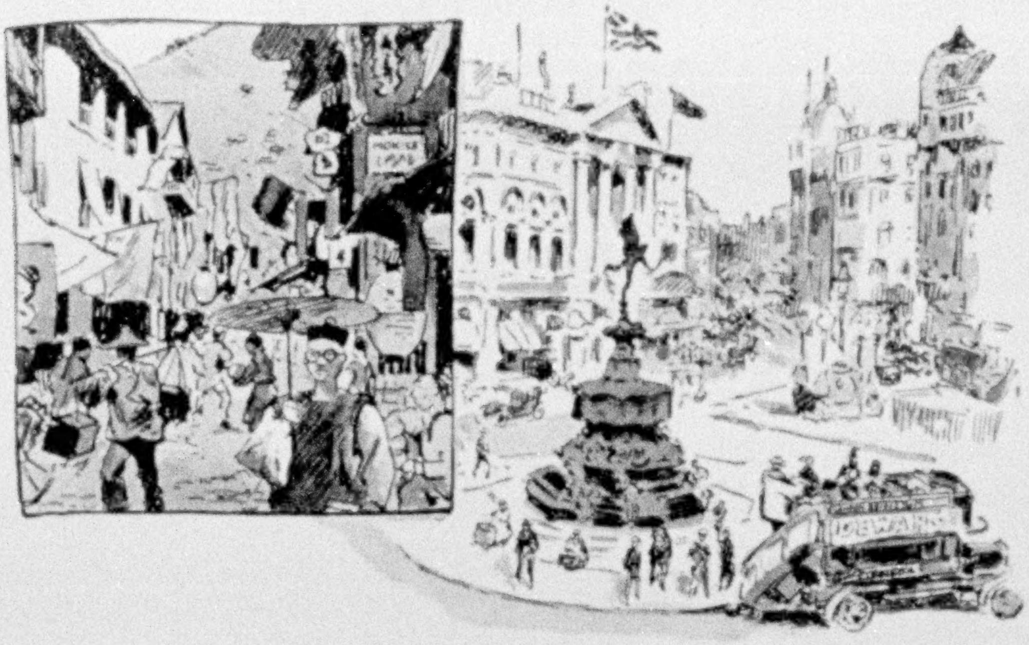
Write for FREE booklets about guns, ammunition and all other products made by Winchester.

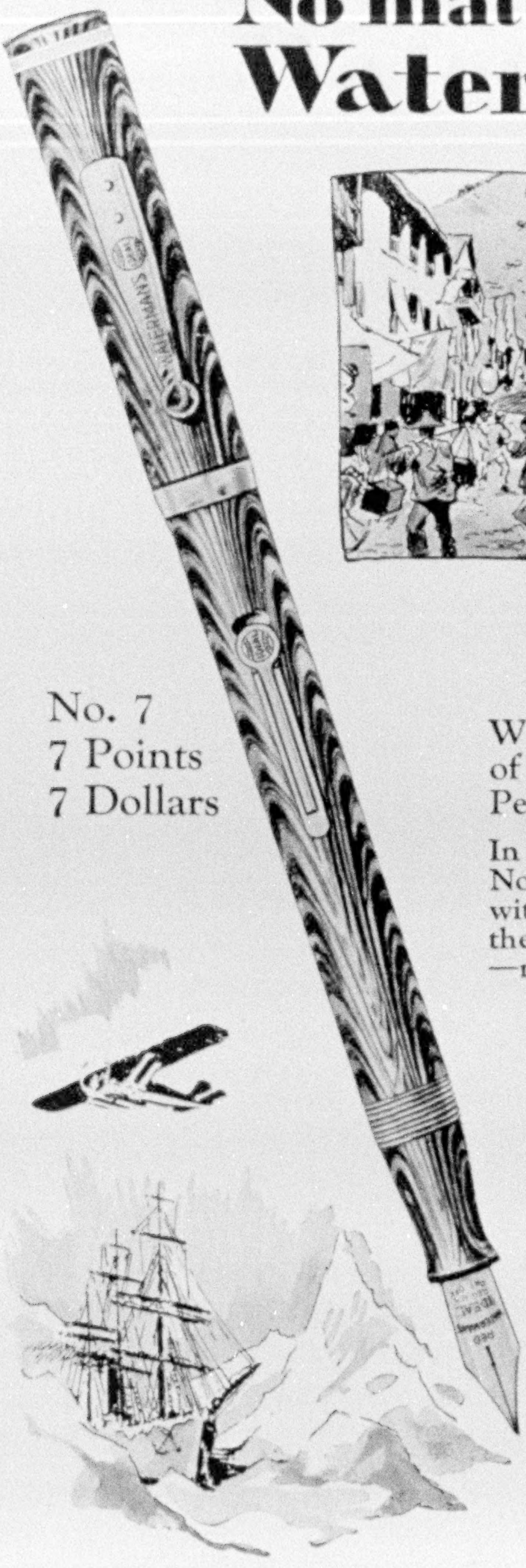


Made by the Makers of
WINCHESTER
Trade Mark
Guns and
Ammunition
Fishing
Tackle
Flashlights
and Batteries
Cleaning and
Lubricating
Preparations
Cutlery--Tools
Ice and Roller
Skates
Auto Radiators
and Radiator
Cores

WINCHESTER
TRADE MARK
WINCHESTER REPEATING ARMS CO.
NEW HAVEN, CONN., U. S. A.
Dept. G

No matter where—
Waterman's is there





No. 7
7 Points
7 Dollars

Wherever men write—in every country of the world—Waterman's Fountain Pens are pens of preference.

In Europe, Asia, Africa—in the cold of the Northlands or in the heat of the tropics—with Commander Byrd in the Antarctic, with the American Museum's expedition in Siberia—no matter where—Waterman's *is there.*

Made to the highest standards of manufacture, Waterman's writing equipment is the inevitable choice of millions of discriminating people the world over. Made in almost limitless variety, there are Waterman's fountain pens, pencils and desk sets for the most fastidious taste or the most modest purse.

Waterman's Number 7 Fountain Pen—with SEVEN different pen points, each identified by its distinctive COLOR band—affords a selection that is sufficiently varied to meet the most exacting of individual writing requirements, and is Waterman's newest and most appealing means of enabling purchasers to preserve handwriting personality.

All Waterman's pens are guaranteed forever against all defects.
Use Waterman's ink in Waterman's pens

Waterman's

MOST COMPLETE CRUISE
OF THE
MEDITERRANEAN
First Class $740 Up

Every country on the Mediterranean will be visited by James Boring's Fifth Annual Cruise—in all, 25 ports in 15 countries and 6 islands. Specially chartered White Star liner Calgaric sails February 15, 1930 from New York. Rates, $740 up, cover all necessary expenses, including sightseeing trips, stopover return ticket. Membership limited to 480. Also West Indies Cruise, Jan. 18, 1930.

Inquire of your local agent or Dept. M 310.

JAMES BORING'S
TRAVEL SERVICE, INC
730 FIFTH AVE. NEW YORK

JOSEPH LYONS
CASH'S WOVEN NAMES

12 Doz. $3.00
6 Doz. $2.00
9 Doz. $2.50
3 Doz. $1.50

Cash's Names
for Marking All Clothing

To prevent loss of laundry, to save arguments as to ownership, to positively identify both clothing and owner, there is nothing like CASH'S NAMES. Woven with fast-color thread on fine cambric tape, CASH'S NAMES are neat, permanent, economical. *Order from your dealer or write.*

Trial Offer
Send 10c for one dozen of your own first name woven in fast thread on fine cambric tape.

J. & J. Cash, Inc.
529th St., So. Norwalk, Conn.
6226 So. Gramercy Place, Los Angeles, Cal.
129 Gray Street, Belleville, Ont.

Deaf Hear Again
Through New Aid

Earpiece No Bigger Than Dime Wins Enthusiastic Following

Ten-Day Free Trial Offer

After twenty-five years devoted exclusively to the manufacture of scientific hearing-aids, the Dictograph Products Co., Inc., Dept. 909-L., 220 West 42nd Street, New York, N. Y., has just perfected a new model Acousticon that represents the greatest advance yet made in the re-creation of hearing for the deaf. This latest Acousticon is featured by a tiny earpiece no bigger than a dime. Through this device, sounds are clearly and distinctly transmitted to subnormal ears with wonderful benefit to hearing and health alike. The makers offer an absolutely free trial for 10 days to any person who may be interested, and a letter will bring one of these remarkable aids to your home for a thorough and convincing test. Send them your name and address today! Advt.

PROVED RESULTS!
THE SUREST TEST OF QUALITY

The 40 Master Model Homes selected from 3,000 designs for the finals of the 1929 National Better Homes competition, conducted by the Home Owners' Institute, all call for Chamberlin Weather Strips. The reason is plain. Chamberlin delivers a degree of draughtproofness, fuel saving and year-'round comfort that only Chamberlin craftsmanship and factory controlled installation can provide. And this fact is recognized.

CHAMBERLIN METAL WEATHER STRIP COMPANY, DETROIT, MICHIGAN

Over 100 Factory Sales - Installation Branches throughout the United States

CHAMBERLIN *Weather Strips*

FREE—booklets on how to enjoy real home comfort at a saving to you. Also complete estimate on Chamberlin Protection for ______ windows ______ doors

Name ____________________
Address ____________________ (FC 340)

A fur coat for your home..

WILLIAMS OIL HEATING

For the cost of one good fur coat you can keep your whole family warm and comfortable all winter long. Before the first snow, install Williams Oil-O-Matic—the fuel oil burner that is heating more homes by far than any other make! Revel in complete freedom from furnace work and worry. Banish dirty coal and dusty ashes. Let more than 90,000 owners tell you that Williams Oil-O-Matic heating is their greatest home convenience.

More than heat—A HEALTHGUARD!

Oil-O-Matic heating—made practical more than a decade ago by Williams engineers—constantly, automatically maintains the exact temperature you prefer! Your doctor will tell you that eliminating alternate overheating and chilling of rooms does away with winter colds and their consequences. Quietly and dependably Oil-O-Matic will assure you June comfort all year round.

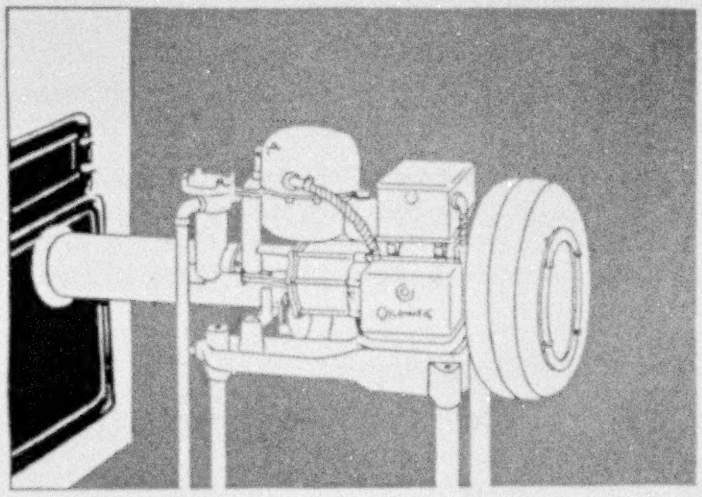
The New Oil-O-Matic Junior

For small homes, at a reduced investment, the new Oil-O-Matic Junior gives the same precise and exact service as the famous Williams Oil-O-Matic, now heating more than 90,000 homes. Oil-O-Matic Junior is a smaller burner of the same type, operates the same way and uses low cost fuel oil.

Tear out and mail the coupon below for complete information. Names of users in your community and details of a special payment plan will be sent you. Tear out the coupon *now!*

A RADIO TREAT

Tune your radio to WJZ and NBC chain stations at 10 o'clock Eastern Daylight Saving Time each Tuesday night. Friday nights at 8:30 Central Daylight Time tune in WGN, Chicago.



"If it isn't a Williams it isn't an Oil-O-Matic"

WILLIAMS
OIL-O-MATIC
HEATING

Listed as Standard by Underwriters' Laboratories

WILLIAMS
OIL-O-MATIC
HEATING
CORP.

BLOOMINGTON,
ILLINOIS

NG-10-9

Williams Oil-O-Matic Heating Corp., Bloomington, Ill.

Please send me your booklet, "Oil Heating At Its Best"—no obligation.

Name..

Address..

City and State..

Unspoken Compliments....

The "spoken compliment" is for the ladies! What is there, then, about a man's evening attire that makes for "unspoken approval"? The cut of his clothes? The way he wears them? Yes—and no! That much can be said about most men. It's the little things that make the good impression!

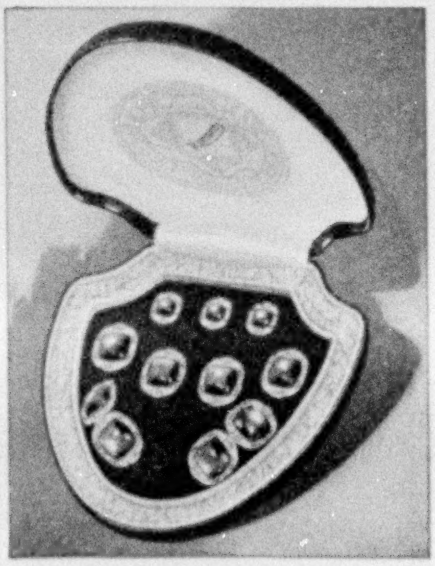
Take, for instance, this newest Krementz Tuxedo Set—smart, correct and all that sort of thing but—it's *just that sort of thing that tickles the eye*—without raising the eyebrow!

The *ideal gift* too, because it also is an "unspoken compliment" to his own good taste!

The smarter shops are showing Krementz Tuxedo and Full Dress Sets correct for the present social season; in gift cases, priced from $7.50 to $50. Names of stores near you upon request.

Krementz

CORRECT EVENING JEWELRY FOR MEN
NEWARK, N. J.



WEEKLY SAILINGS to SOUTH AMERICA

COLOMBIA..
PANAMA..BOLIVIA
ECUADOR..PERU..CHILE

MATCHLESS scenic grandeur. Unsurpassed natural beauty. Perfect climate the year around.

Speedy new motorships. Ship and shore arrangements carefully planned. Banking facilities. A background of 75 years of uninterrupted success.

18-DAY to 3-MONTH TOURS TO and AROUND SOUTH AMERICA

For Illustrated Literature Address

GRACE LINE
10 Hanover Square New York

EUROPE

EGYPT — PALESTINE

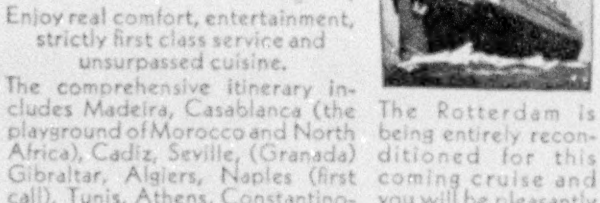
WINTER SPRING
SUMMER

Send for Booklet

TEMPLE TOURS
INCORPORATED

443-D Park Square Building
Boston, Mass.

THE LUXURY CRUISE
MEDITERRANEAN
PALESTINE - EGYPT



71 DAYS OF DELIGHT

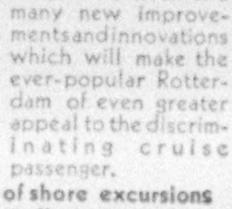
Sail away on the famous cruising steamer

ROTTERDAM
From N. Y. FEB. 6th 1930

under Holland-America Line management.

Enjoy real comfort, entertainment, strictly first class service and unsurpassed cuisine.

The comprehensive itinerary includes Madeira, Casablanca (the playground of Morocco and North Africa), Cadiz, Seville, (Granada) Gibraltar, Algiers, Naples (first call), Tunis, Athens, Constantinople, Haifa, Jerusalem, (the Holy Land), Alexandria, Cairo (and Egypt), Kotor and Dubrovnik (on the Dalmatian Coast), Venice, Naples (second call), Monaco, and the Riviera. **Added to these fascinating ports of call will be Malta, the romantic, Cyprus, the sunny isle, and Syracuse in Sicily.**

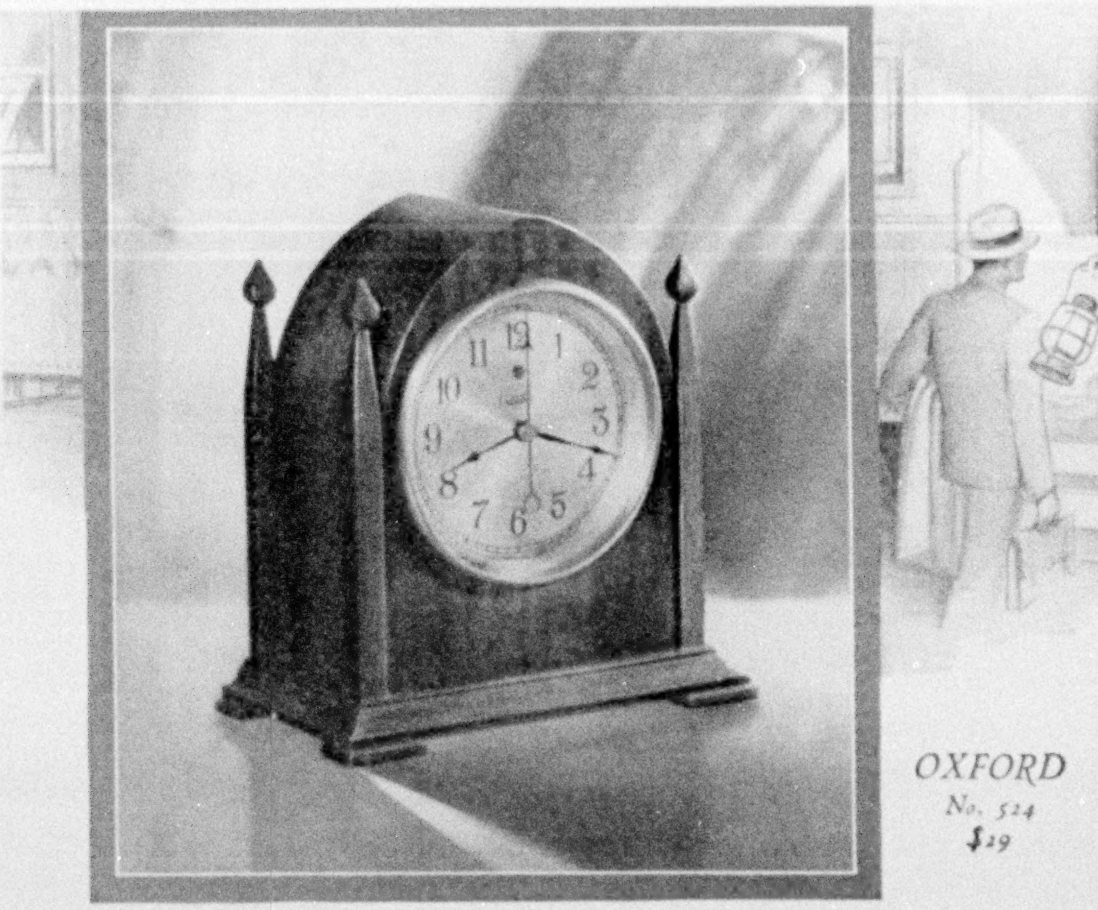


The Rotterdam is being entirely reconditioned for this coming cruise and you will be pleasantly surprised with the many new improvements and innovations which will make the ever-popular Rotterdam of even greater appeal to the discriminating cruise passenger.

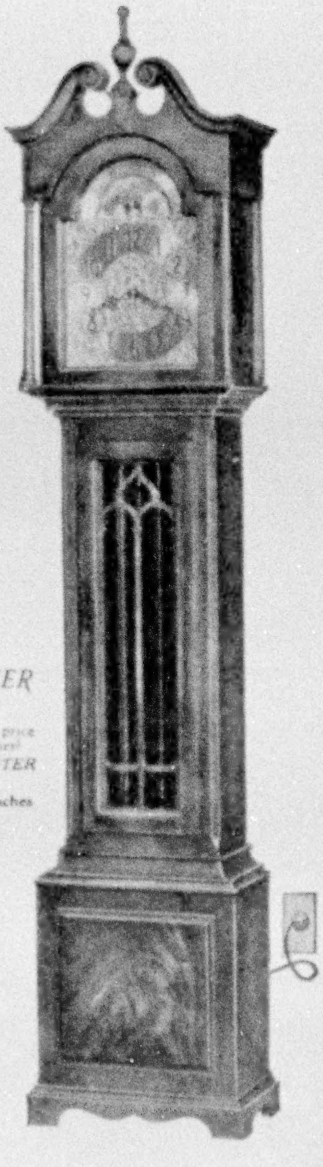
American Express Co. in charge of shore excursions

Write for illustrated booklet "N"

HOLLAND-AMERICA LINE
21-24 STATE STREET, NEW YORK
Branch Offices and Agents in all principal Cities.



OXFORD
No. 524
$29



HANOVER
$300
(Pacific Coast price slightly higher)
WESTMINSTER CHIME
Height 87½ inches

You **know** *you can depend on Telechron clocks!*

THE timekeeping accuracy so essential to modern railroad systems is equally important to us in our business or everyday life. That is why Telechrons, the modern springless electric clocks, are attaining new heights of popularity. Telechron Clocks and Revere Chiming Clocks, Telechron Motored, bring "time-table accuracy" into your own home. They simply plug into an electric outlet and tell correct electric time, with no winding or regulating to do. The tiny, patented Telechron electric motor drives the hands silently, precisely, on exactly timed impulses regulated by power stations' master clocks—the electric current *keeps* it correct!

There is variety enough in the many case designs, chime and strike features to satisfy every decorative requirement—from a charming Telechron desk clock, at $14, to stately, hand-carved floor clocks, equipped with Westminster, Canterbury and Whittington Chimes, up to $1200.

These masterpieces of timekeeping accuracy are displayed at your local Authorized Dealer's. See them!

Telechron and Revere Clocks

—the Springless Electric Clock
WARREN TELECHRON CO.
ASHLAND, MASS.

—Telechron Motored
REVERE CLOCK COMPANY
CINCINNATI, OHIO

In Canada, Canadian General Electric Co., Toronto, Ont.

WARREN TELECHRON CO., 1005 Main Street, Ashland, Mass.
Without obligation send your new illustrated catalog

Name ____________________

Address ____________________

____

© 1929, Warren Telechron Co.

TRAVEL INTEREST TURNS TO

SOUTH AMERICA

The "FOUR PRINCES"

"Northern Prince," "Eastern Prince," "Southern Prince," "Western Prince"—already these names are a byword in the trip between New York and Rio de Janeiro, Santos, Montevideo and Buenos Aires. Already the prospects of travel are brightened by their modern luxury, by their safety, by the speed and vibrationless power of their twin Diesel motors.

Accommodations for first-class passengers only. Reservations and literature at authorized tourist agents, or address Furness Prince Line, 34 Whitehall St. (where Broadway begins), or 565 Fifth Avenue, New York City.

Prince Line Service has been continuous between New York and South America for 35 years.

FURNESS *Prince* LINE

⟨SAY IT WITH FLOWERS⟩

IT'S *Mum* TIME

CHRYSANTHEMUMS ARE IN FULL GLORY NOW

THE GOLDEN HOUR FOR YOUTH'S OWN

FLOWER

$AVE ***Money on Books and Magazines***

Our new catalog is ready. Novel, original, delightful. Filled with information you want. The best in Fiction, Drama, History, Philosophy, Music, Biography, Reference Books, Poetry or whatever your favorite subject may be. Also practical books for the mechanic and artisan. Current novels and "best-sellers." Leading Magazines, both American and Foreign. Every book lover, club woman, teacher and student should have this catalog for reference. We pay all transportation charges. Provide yourself and your children with good Books. Send for your copy today. It is **FREE!**

Save money. We supply any book in print. U. S. and Foreign Magazines. Let us quote you.

THE NEW YORK PUBLISHING COMPANY **Dept. 3-M** **25 Dominick St., NEW YORK**

THIS MAGAZINE IS FROM OUR PRESSES

JUDD & DETWEILER, INC.

Master Printers

ECKINGTON PLACE AND FLORIDA AVENUE WASHINGTON, D. C.

In hanging up colored prints, use

Decorative Moore Push-Pins

6 colors—Rose, Amber, Blue, Green, Crystal, and Black, with gilt decorations. 3 sizes

10c a block

All Dealers

MOORE PUSH-PIN CO., PHILADELPHIA

Originators of Moore Push-Pins and Moore Push-less Hangers.

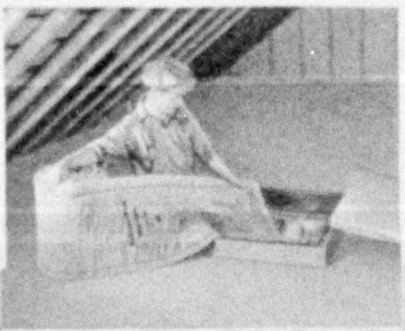
? *Whatever your Question*—whether it concerns the **spelling, pronunciation,** or **meaning** of a word; a fact about a **famous character,** or **historical** event, or **geographical** point; some detail of **science, business, government, literature,** or any other subject, look it up in the "Supreme Authority".

WEBSTER'S NEW INTERNATIONAL DICTIONARY

contains an accurate answer. **452,000** Entries, **2,700** Pages, 12,000 **Biographical** names, 32,000 **Geographical** subjects, 6,000 **Illustrations**, Regular and India Paper Editions. Write for specimen pages, etc., mentioning Geographic to

G. & C. MERRIAM COMPANY, Springfield, Massachusetts.

Here is a simple, inexpensive way to modernize your heating equipment



Balsam-Wool can easily be carried through any opening that will admit the body of a workman. Strips of Balsam-Wool cut to proper length in the basement or garage can be carried to the attic by a single workman.

A THICK blanket of soft *flexible* Balsam-Wool in the walls and roof to *save heat* makes any heating equipment modern. In houses built before the days of insulation, heating equipment can be modernized with a Balsam-Wool blanket in the attic.

Then the heating plant doesn't have to heat all outdoors. The woolly blanket of Balsam-Wool keeps the heat *inside* where it belongs and soon pays for itself in fuel saving. And in summer it *keeps out* the stifling heat, making upstairs rooms comfortable on hottest summer days and nights.

Balsam-Wool can be easily and quickly installed in any new house and in the attic of any house already built that has an opening to admit a workman. Balsam-Wool is *flexible* and *tucks in* as only a flexible material can. A full inch thickness tucked between rafters or attic floor joists—around windows and doors—really keeps the heat *in* and the cold *out*. It is *true* insulation. A necessary part of *every* efficient heating equipment.

Learn more about this heat saver. Use the coupon to send today for a free sample and booklet.

WOOD CONVERSION COMPANY
CLOQUET, MINNESOTA

Makers of Balsam-Wool, the Flexible Insulating Blanket. Also makers of Nu-Wood, the All-Wood Insulating Wall Board and Lath

Sales Offices in
Principal Cities

Balsam-Wool
Blanket
—it tucks in!

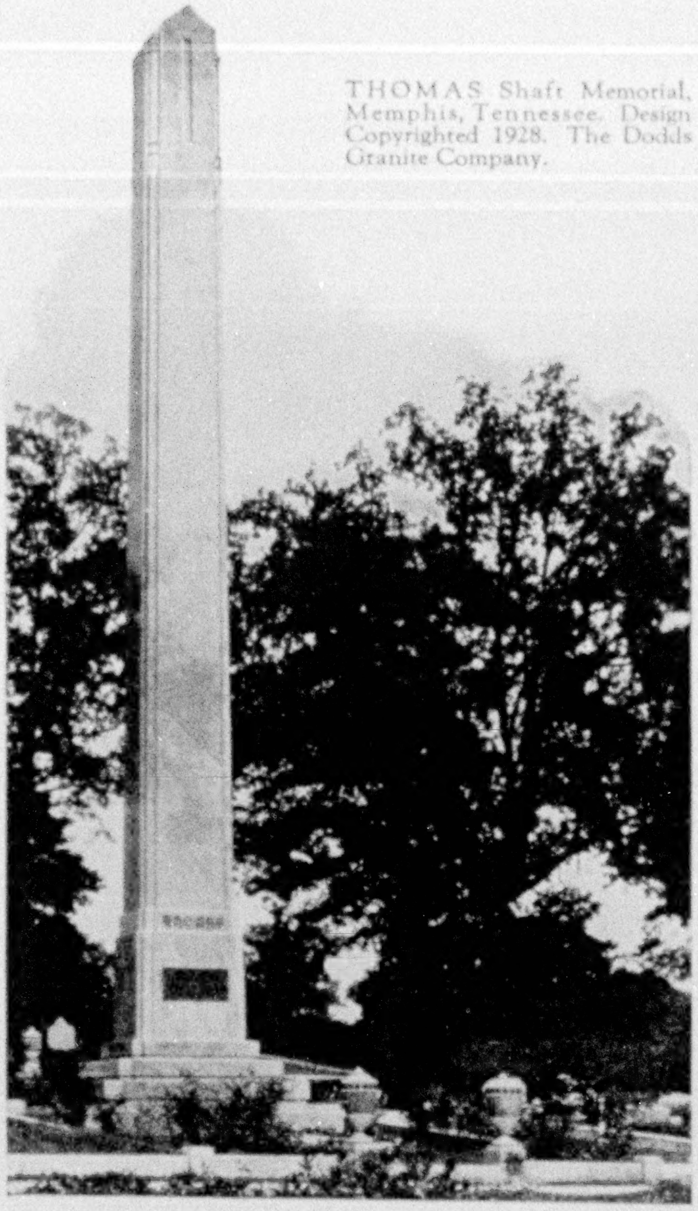
Balsam-Wool is a guaranteed Weyerhaeuser product—a blanket of fluffy wood fibre that looks and acts like sheep's wool. It is TRUE insulation—keeping the house warm in winter and cool in summer—because it is—

FLEXIBLE-THICK
EFFICIENT
WINDPROOF
WATERPROOF
FIRE RESISTANT
VERMIN PROOF
LIGHT WEIGHT
PERMANENT

WOOD CONVERSION COMPANY, Dept. 85, Cloquet, Minn. M-14-B

Gentlemen: Please send free sample of Balsam-Wool and booklet, "House Comfort that Pays for Itself." I am interested in insulation for ☐ A new house. ☐ The attic of my present one.

*Name*______ *Address*______ *City*______ *State*______



THOMAS Shaft Memorial, Memphis, Tennessee. Design Copyrighted 1928. The Dodds Granite Company.

Memory enshrined in eternal granite - - - -

Towering majestically Heavenward, symbolical of recreative power, the lofty spire makes a distinct appeal as a worthy tribute to mark that place of sacred memories. The shaft here illustrated with Gothic enrichment towers forty-five feet. All its surfaces are highly polished, thus intensifying the remarkable coloring and natural veining in the Stony Creek Granite. Dodds Quarries and Plants produce Memorials of matchless beauty that will stand through the centuries, representing priceless memories and everlasting hope. Your request for our book, "Modern Memorial Art," will be promptly granted.

The DODDS
GRANITE COMPANY
Established 1864
1336 New York Central Bldg. NEW YORK CITY

Chicago Studios: BUILDERS' BLDG., La Salle St. and Wacker Drive
Quarries and Manufacturing Plants:
MILFORD, MASS., KEENE, N. H., STONY CREEK, CONN.
Exclusive Producers:
MILFORD PINK GRANITE, VICTORIA WHITE GRANITE, STONY CREEK GRANITE
Above Names Protected by Trade Mark

The Best Abridged Dictionary

It is Based Upon
WEBSTER'S NEW INTERNATIONAL

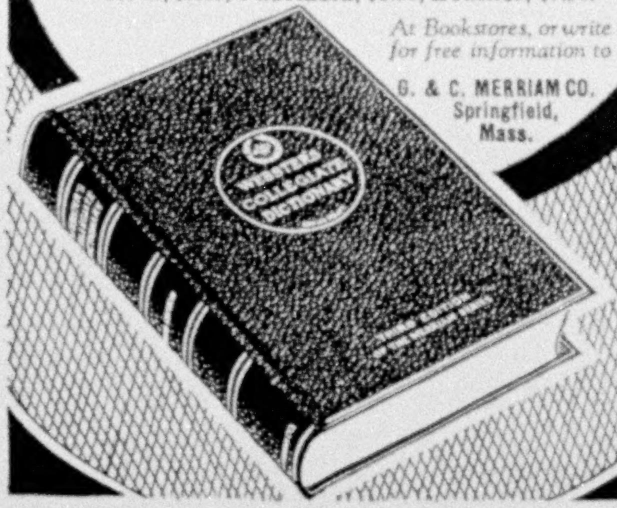
Webster's Collegiate Dictionary

A short cut to accurate information—a companion for your hours of reading, writing and study that will quickly make itself indispensable for its wealth of ready information on just the questions which most often puzzle you.

A Merriam-Webster: 106,000 Entries, including the important *NEW WORDS,* 1,700 illustrations. Cloth, $5.00; Fabrikoid, $6.00; Leather, $7.50.

At Bookstores, or write for free information to

G. & C. MERRIAM CO.
Springfield,
Mass.



deaf!

From our 50 years' experience assisting the deaf, let us help you select the right hearing instrument. We are headquarters for advertised hearing instruments of merit, European or American, electrical or non-electrical, and can supply you with any kind.

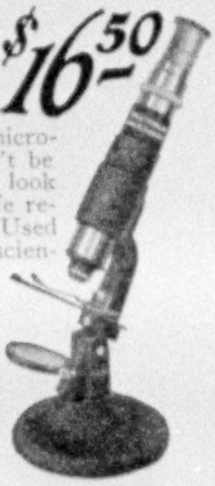
Trial Offer on Every Instrument
Write for Catalog N
"Headquarters for All Hearing Devices"

E. B. Meyrowitz
INCORPORATED
520 Fifth Avenue (at 43rd St.), New York

250 POWER MICROSCOPE $16.50
MADE IN U.S.A.

Educational, entertaining, this fine microscope helps all to know life that can't be seen with unaided eye. Tiny insects look like monsters. Plant and mineral life reveal new wonders in form and color. Used by students, dentists, physicians, scientists, in home, office, school and laboratory. Precise optical qualities. Magnifies 100 to 250 times. Tilting stand, fine finish, nickel trim, plush-lined case, prepared slide, instructions. At your dealer or direct, postpaid. Money-back guarantee. Other models, $2.50 and $8.50. Catalog free.

Wollensak Optical Company
859 Hudson Ave., Rochester, N. Y.



EVERYONE SHOULD KNOW

SOMETHING ABOUT THIS SUBJECT

NATIONAL
CASKET COMPANY, INC.
SOLID MAHOGANY

THERE is perhaps nothing that one is called on to buy less frequently than a casket. How, then, can there be any certainty that the purchaser will get the value he has a right to expect—that the style of the casket will conform to thoroughly modern standards of acceptance?

The safest course is to select a casket which is made by a well-known manufacturer—one whose position in the industry is so outstanding that the value and authenticity of design can be taken on faith.

For nearly half a century the National Casket Company has been known and respected as a reliable concern. On all of its caskets there is placed a visible but inconspicuous trademark. A reproduction of this trademark is shown above. It not only guarantees the finest casket construction, but also specifically names the material used.

National caskets are sold only through funeral directors. It is reasonable to assume that those who handle merchandise of high quality have high standards of service.

We have prepared a little booklet, "Funeral Facts." We shall be glad to send this to anyone upon request. Address Dept. D-4, 60 Massachusetts Avenue, Boston, Massachusetts.

NATIONAL CASKET COMPANY

INCORPORATED

DISPLAY ROOMS IN TWENTY-SEVEN CITIES

A choice of leathers $3.50 and up

Men instantly note the distinction of this "two-fold" styled by Enger-Kress. Sized to fit the small currency—holds lodge cards and large sized bills as well

New-Size Billfolds *with* Added Features

New convenience—new style. Look for the Enger-Kress name on billfolds for small currency. Compact—practical—ingenious. Small and convenient—but large enough to hold the important cards every business man carries.

Or, if you prefer a breast pocket wallet, note this one by Enger-Kress, styled in London. You may have it in calfskin, morocco or steerhide, with cut or hand laced edges. Fits the pocket snugly, arouses admiration for its distinctive neatness. You must see it to appreciate its unusual features. At your dealer's, or write

Enger-Kress leather specialties bear this symbol of "44 Years of Fine Leather Craft"

ENGER-KRESS COMPANY
Leather Crafters
WEST BEND, WIS.

One for All and All in One

SAFETY - PERMANENCE - CHARACTER

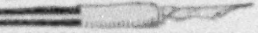
for all usual & unusual writing

(Made only by CHAS. M. HIGGINS & CO., 271 Ninth St., B'klyn, N.Y.)

At all Dealers 10¢

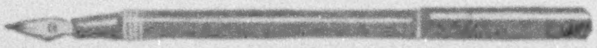
HIGGINS' ETERNAL
BLACK WRITING INK

HIGGINS' Eternal black writing Ink



JET BLACK - NEVER FADES - PROOF AGAINST CHEMICALS

For Steel Pens & Fountain Pens



DUES

Annual membership in U. S., $3.00; annual membership abroad, $4.00; Canada, $3.50; life membership, $100. Please make remittances payable to the National Geographic Society, and if at a distance remit by New York draft, postal or express order.

RECOMMENDATION FOR MEMBERSHIP
IN THE

NATIONAL GEOGRAPHIC SOCIETY

The Membership Fee, Which is for the Calendar Year, Includes Subscription to the National Geographic Magazine

PLEASE DETACH AND FILL IN BLANK BELOW AND SEND TO THE SECRETARY

. . . . 192

To the Secretary, National Geographic Society,
Sixteenth and M Streets Northwest, Washington, D. C.:

I nominate . . . .

Occupation . . . .
(This information is important for the records.)

Address . . . .

. . . . *for membership in the Society.*

. . . .

10-29 . . . .
Name and Address of Nominating Member

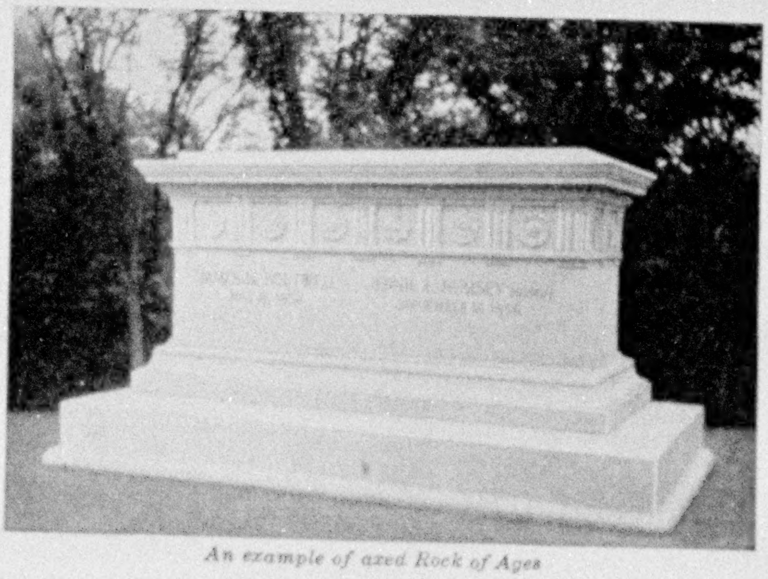
GENUINE ENGRAVED *business cards open closed doors*

It costs two dollars or more to place your salesman in the waiting room of an average prospect. And his chance of getting on the right side of that closed door may hinge upon the impression conveyed by a calling card! Make your cards say, "This man *must* be seen!" You'll find *genuine engraving* a big help. And the cost, only a trifle more.

ENGRAVED STATIONERY MANUFACTURERS ASSOCIATION

In buying, look for the identifying symbol pictured here. This mark, affixed to the material, is your positive assurance of *genuine engraving*.

What to Consider



An example of axed Rock of Ages

When you select a Memorial there are four points that should influence your choice...appropriateness...harmony...design...and permanency. Style and design should be symbolic of the personality of the one to be memorialized. The finished memorial should be in harmony with its setting and surroundings. Naturally it should be made of a material that will withstand all climatic conditions. Rock of Ages Granite may be both axed and polished...its blue-gray, even texture may be toned to please the eye. Carefully selected...rigidly inspected...certified in writing ...Rock of Ages Granite sturdily resists any weather condition. A Rock of Ages memorial may truly be termed permanent.

Consult a memorial dealer nearby—he will show you Rock of Ages Granite...will aid in selecting a memorial that will be both pleasing and appropriate.

ROCK OF AGES

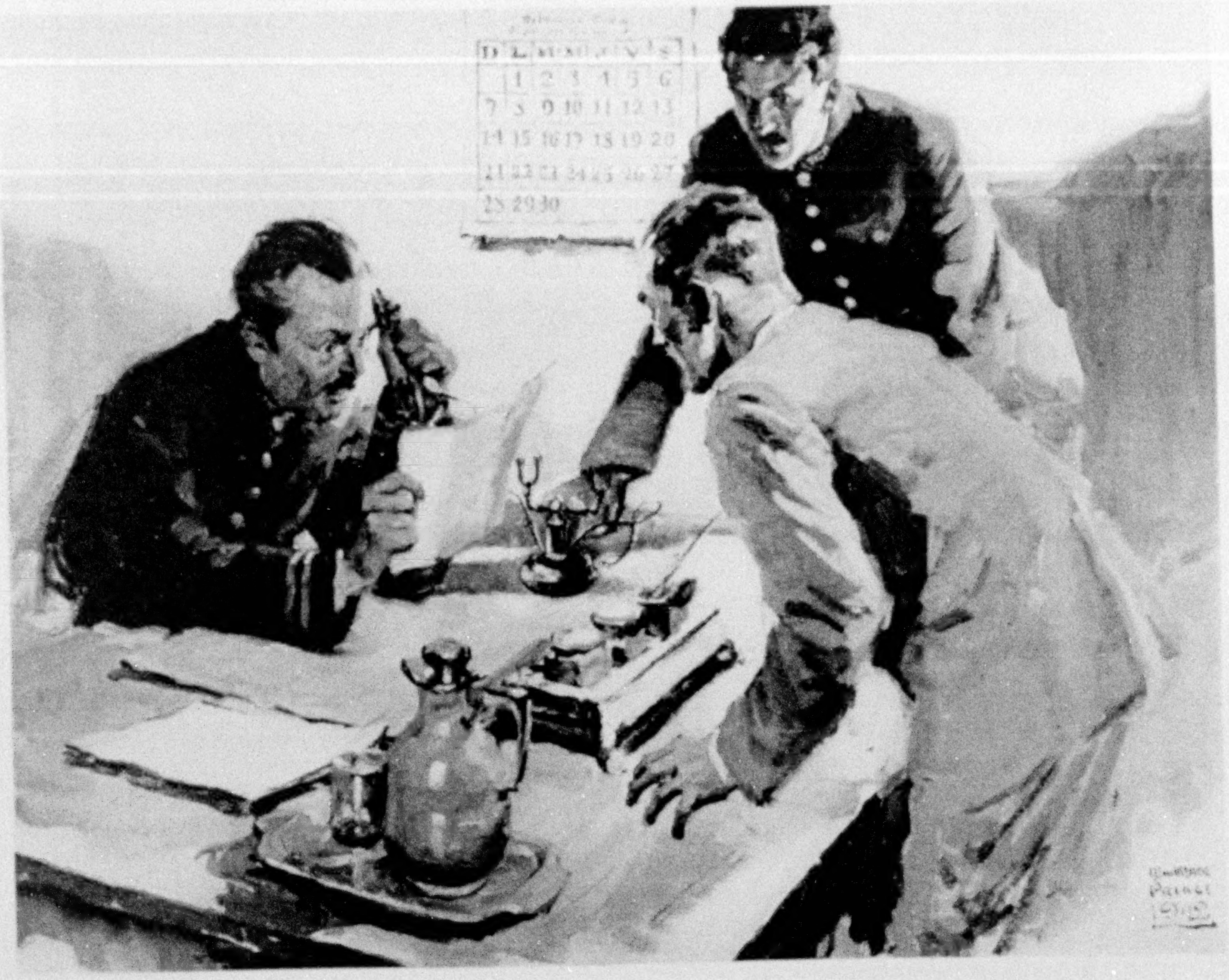
THE DISTINCTIVE BARRE GRANITE

ROCK OF AGES CORPORATION — BARRE, VERMONT

Please send booklet — *"How to Choose A Memorial."*

*Name*____________________

*Address*____________________ D10



"Round up every passenger!"

An ocean liner from Bombay discharged six hundred passengers at Marseilles, Liverpool and Glasgow last April. All France, England and Scotland were aroused when the health authorities discovered too late that the passengers had been exposed to the dreaded smallpox, from which one of the crew had already died.

"Warn the newspapers—round up every passenger at once!" were the orders that went out to police and health officers everywhere.

Meanwhile the passengers had scattered all over Great Britain and France—and before the desperate hunt was over, more than 300 cases of the terrible disease were reported and a number of persons had died.

The victims of this tragic circumstance had neglected the simple precaution that has practically wiped smallpox out of every civilized country in the world. Nearly a century and a half before, on May 14, 1796, Dr. Edward Jenner, of Berkeley, Gloucestershire, had given to the world the means of conquering smallpox by vaccination.

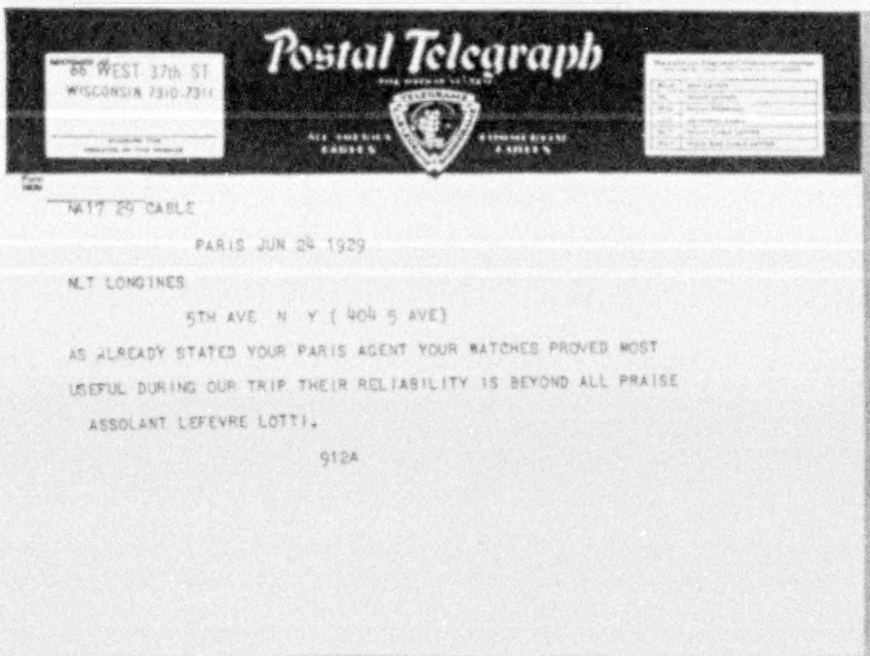
Before Jenner's discovery, smallpox killed one out of every fourteen persons. Today, in all countries where vaccination is rigidly enforced, the once terrifying scourge is held under control.

Yet, right in your own community, smallpox is ready to rear its ugly head at the first sign of carelessness and neglect. Your doctor will tell you that every member of your family should be protected against this disease.

In the laboratories of Parke, Davis & Company, smallpox vaccine is prepared with the most exacting care. Your physician is convinced of its dependability because he knows that, like every other Parke-Davis product, it must pass the most rigid tests for purity and potency before it is placed at his disposal.

PARKE, DAVIS & CO.

The world's largest makers of pharmaceutical and biological products



Postal Telegraph

66 WEST 37th ST
WISCONSIN 7310-7311

NA17 29 CABLE

PARIS JUN 24 1929

NLT LONGINES

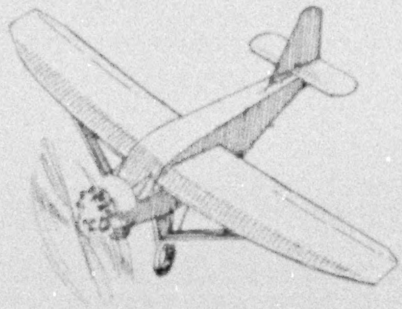
5TH AVE N Y (404 5 AVE)

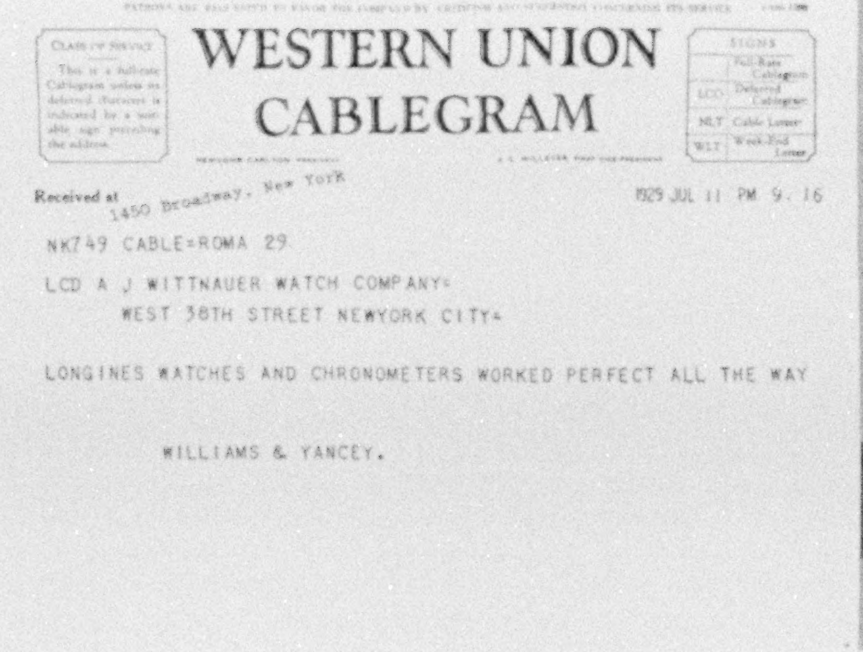
AS ALREADY STATED YOUR PARIS AGENT YOUR WATCHES PROVED MOST USEFUL DURING OUR TRIP THEIR RELIABILITY IS BEYOND ALL PRAISE

ASSOLANT LEFEVRE LOTTI.

912A

THE GREATEST FLIGHTS ARE MADE WITH LONGINES WATCHES EXCLUSIVELY





CLASS OF SERVICE

This is a full-rate Cablegram unless its deferred character is indicated by a suitable sign preceding the address.

WESTERN UNION
CABLEGRAM

SIGNS	
	Full-Rate Cablegram
LCO	Deferred Cablegram
NLT	Cable Letter
WLT	Week-End Letter

Received at 1450 Broadway, New York

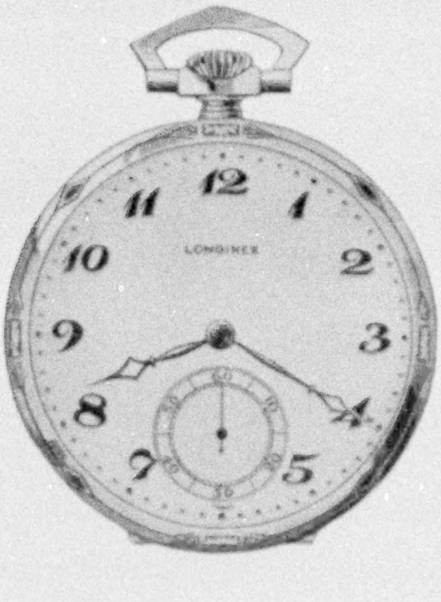
1929 JUL 11 PM 9. 16

NK749 CABLE=ROMA 29

LCD A J WITTNAUER WATCH COMPANY=
WEST 38TH STREET NEWYORK CITY=

LONGINES WATCHES AND CHRONOMETERS WORKED PERFECT ALL THE WAY

WILLIAMS & YANCEY.



The two latest transatlantic flights, one by ASSOLANT, LEFEVRE and LOTTI and the other by ROGER Q. WILLIAMS and Capt. YANCEY, from America to Europe, were, of course, equipped with Longines watches and chronometers exclusively.

Every long distance or scientific flight, sponsored by any country the world over and carried through successfully, has been accomplished with the aid of Longines timepieces. No other instruments of the kind have met with such universal recognition by scientists and aviators.

Great flights are planned carefully . . . famous aviators' opinions may differ as to the ablest ship, the best oil or the sturdiest motor . . . but there is one important matter upon which they always will unanimously agree, and that is, that a Longines is the only watch in the world to whose accuracy and dependability the safety and success of a flight may unreservedly be entrusted.

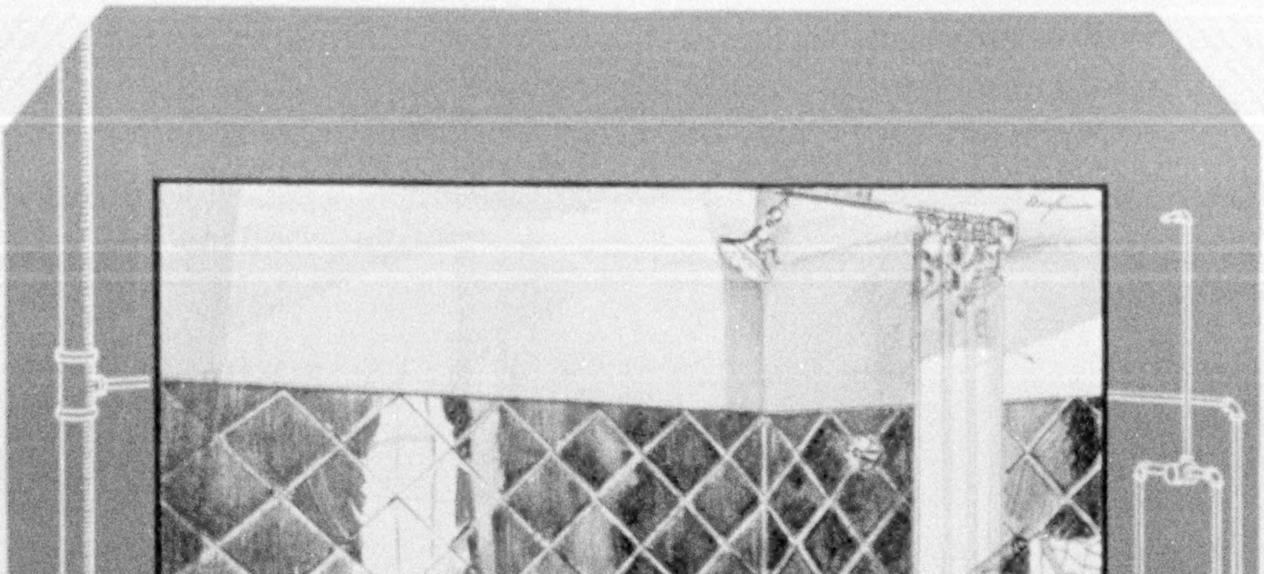
A. WITTNAUER CO.

Established 1866

402-404 FIFTH AVENUE

NEW YORK CHICAGO MONTREAL GENEVA

PRESS OF JUDD & DETWEILER, INC.
WASHINGTON, D. C.



When Anthelme Brillat-Savarin, French epicure, visited America in the early XIX century, he complained because he found no fixed bath. Now, bathroom equipment is a distinct American contribution to the building art, and bathroom beauty and comfort reaches its peak in fixtures like this Crane *Corwith* bath. Its design was inspired by modern architecture. It may be had in white or color. Its jewel-like fittings are new, with octagonal planes, plated in gold, silver, or chromium. With overhead shower, it expresses today's demand for appointments both beautiful and practical. For many new ideas on equipment and decoration, write for *Bathrooms for Out-of-the-Ordinary Homes.* Or see your plumbing contractor.

CRANE

GENERAL OFFICES: CRANE BUILDING, 836 S. MICHIGAN AVENUE, CHICAGO
NEW YORK OFFICE: 23 W. 44TH STREET
Branches and Sales Offices in One Hundred and Eighty Cities